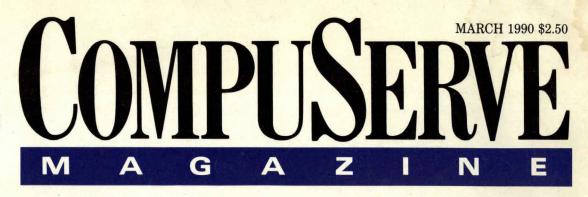
Upgrading Your Modem? Read Page 22 First

A Thought for Your Pennies—p. 28

'Architrekking' in Chicago—p. 32



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CONTENTS

FEATURES

Feature Story

Extra Special Delivery

Electronic mail is hurdling communication barriers caused by faltering conventional mail services, political upheaval and those you-can't-get-there-from-here delivery problems. With e-mail, fax and hardcopy connections, no place is out of the way, no problem too big. Bonus: CompuServe Information Manager adds features such as filing, in- and out-baskets and full-text editing to CompuServe Mail.

Computing Services

22 Considering a Modem Upgrade?

CompuServe Magazine's reviews editor provides some modem shopping tips. Bonus: Practical Peripherals. PPI Forum welcomes telecommunicators who need advice on the care and feeding of modems and other peripherals.

- 26 Apple Forums Branch Out: MAUG adds four special-interest forums to its Apple family, making it easier than ever to find software and support.
- 27 Members Make the Microsoft Connection: Microsoft, the "Windows" company, offers online assistance in an upgraded forum.

Money Matters

28 NASDAQ Is Not an Arab Country

Often overlooked and misunderstood, NASDAQ, the world's third-largest stock exchange, holds some hidden gems for investors, says Adams Securities broker Paul Tautvaisas. Bonus: Penny Pinching. Penny stocks can't be tracked on major exchanges or through the media. So how do you know when to buy?

32 'Architrekking' in the Windy City

Take any of several tours sponsored by the Chicago Architecture Foundation to view such diverse design monuments as the world's tallest building, the first department store and scores of other modern or well-preserved structures. Bonus: A Gastronomical Tour. Taste the real Chicago at some local haunts.

37 What Fare Is Fair? Round-trip and one-way fares can change from day to day and even hour to hour. Use CompuServe travel services to find the best rates.

Personal Business

40 I Read It in a Magazine...But Where?

Skip those card catalogs and out-of-date printed indexes. Research the topics and periodicals of your choice online and get abstracts or full text immediately.

Everything You Always Wanted To Know about human sexuality is probably feet on a normal day? page 32 available somewhere in the reorganized HSX Forum. Check it out.



Electronic Mail has become the universal tie that binds....page 14



Did you know the Sears Tower sways about 27

Too Hot to Print

Latch computer industry news as it happens, read special reports, commentary and more product reviews. You'll find it only in Online Today, a daily-updated newspaper.

Behind the Screens OLT-130 OLT-50 CompuServe This Week **Online Today Guide OLT-351 OLT-200 Product Reviews Special Reports OLT-2000** Today's News **OLT-90**

DEPARTMENTS

3 Letters 43 Go Mall **Dear Reader** 59 Hardware and Software Reviews Monitor 10 **Uploads: New and Classic Forum Files** Update: Last-minute News

CompuServe Magazine (ISSN 0891-4672) is published monthly in the United States of America by CompuServe Incorporated, 5000 Arlington Centre Blvd., Columbus, OH 43220.

Magazine Makeover

I just received my copy of the new CompuServe Magazine, and was quite pleased with the redesign. It now looks like a real magazine, instead of a newsletter. The design bears the unmistakable stamp of Brady & Paul: it's clean, attractive, sensible, and it serves the editorial mission. I am in the magazine business myself, and I commend you on taking a dramatic step that was much needed.

Royce Grayson Lakeland, Fla.

Your new cover and format is a welcome change. An idea that might help us new users: include in a box the GO command for the service covered in each article. This would be of assistance when we reread the issue and can quickly select the command.

I enjoy your features and "How to Get the Most Out of CompuServe" as well. Thanks for the change.

> Ron Fandrick Fremont, Calif.

I just received my CompuServe Magazine. I really like your new look and enjoyed the articles. I just became a member of CompuServe a few months ago, and I appreciate all the help I can get.

I enjoy using CompuServe and look forward to my magazine arriving each month.

Kathy Poynor Banner, Miss.

Being Your Own Boss

"Want to be Your Own Boss?" (November issue, page 50) suggests that something is not quite right when "a full 53 percent of Americans dream of owning their own businesses, yet only 2 percent actually take the plunge—quitting a secure job in exchange for all the rewards and risks of being their own boss." The article attributes that primarily to the "lack of information." I would like to suggest other possible reasons.

I am of the 2 percent of Americans who have taken the plunge. I have had a fairly successful information systems engineering consulting business; yet I am seriously considering returning to a "secure job." In the short run, the business is doing very well. The market segment of this type of business is projected as a high growth market. Its long range prospects, however, seem to involve higher risks and escalating headaches.

Failing to see avenues for a solution to these mounting problems, I am seriously considering leaving the 2 percent and rejoining the 53 percent.

> Sami Albanna Bethesda, Md.

Modem Review

Near the end of the Practical Peripherals 2400SA/MNP modem review (December issue, page 44), the distinction between software error checking and file transfer protocol software could be made more clear.

As I understand the situation, it is indeed the case that a transfer protocol must be used when non-ASCII files are sent via modem from one computer to another (and is probably advisable for ASCII transmissions as well). But some transfer protocols do not include software error checking; these special protocols (e.g., IMODEM and YMODEM-G) are intended only for use with modems (such as the one reviewed) that can be, and in fact have been, set up by the user to do hardware error detection.

If MNP hardware error detection ("reliable link") is active, choosing a protocol such as IMODEM (instead of one of the error-correcting protocols, such as XMODEM, employed for non-"reliable" transmissions) will increase the efficiency of file transfers, because the hardware can do the error detection without a repetitive (and timewasting) recheck by the software. (See pages 66-71 of the Practical Peripherals modem operating manual.) Under these cir-

cumstances, therefore, an MNP modem (contrary to what is said in the review) does indeed "do away with the need for error-checking protocols in software."

J. Coleman Kitchen Washington, D.C.

Editor's note: For more information about MNP, see page 23 of this issue.

Send a Letter

- OLT-30 Letters to the Editor main menu. Lists all departments.
- OLT-31 Send a letter instructions. Complete instructions on how to send a letter to the editor via the electronic service.
- OLT-32 Read letters from other OLT readers.
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3

Dear Reader

Deople Power" is a worldwide incantation that gets a lot of attention these days. We see it on television in the form of popular uprisings and eerie images of dour old communists gathered under great portraits of Lenin, dutifully and unanimously voting themselves out of office in the same manner that they used to legislate oppression.

Such changes have stemmed from dramatic political turnabouts. But what gave birth to political New Thinking? There's little doubt that communication with a Big C has played a major role, perhaps the leading role. With more broadcasts spilling over borders, faxes in Beijing, and briefcase computers whose equal in power could only have been smuggled in on 18-wheelers twenty years ago, it's simply no longer possible—economically or physically—to keep people cloaked from the truth.

None of this is new observation, of course. But there is a new and often overlooked form of People Power emerging from among the panoply of communication technology's "people's weapons": electronic mail. With the ability to "jump media"—you can now turn your CompuServe Mail into a telex, fax or plain hardcopy for delivery by traditional post -you can surmount almost any physical or political barrier to get your message into the right hands nearly anywhere in the world.

Many CompuServers are already doing it.

Take Robert Switzer of Tucson, Ariz., for example. He searched for 29 years to find his two sons who were snatched away by his ex-wife when they were toddlers. He and his sons used all the "proper channels," including the Social Security Administration, to reestablish contact—to no avail. The government didn't deliver letters the sons wrote to their father and other avenues all turned into dead ends. Then, in December, Robert searched CompuServe's membership directory, found a "John Switzer," and dashed off an e-mail message. He got a reply. The family, sons John, 34, Robert, Jr., 35, and daughter Michele, 29, are now reunited.

Or take Scott Harrison, director of Amnesty International's "urgent message" program who uses electronic mail and bulletin boards to speak up for voiceless political prisoners. Not only does Harrison use CompuServe Mail to send out worldwide appeals, but also to garner letter-writing and lobbying support from thousands of others online who care about the plight of political prisoners who face injustice, torture and death.

Or look at Carl Phillips, who relies on computer and fax links to Asian and Latin American countries to operate his Phoenix-based investment company. With the ability to circumvent dubious-quality mail and telephone systems, he can do business in such far-flung corners of the earth as Borneo.

There are thousands more out there like Robert, Scott, Carl and you who are discovering "People Power Mail." We urge you to uncover our cover. "Electronic mail may be the communication that keeps our world talking and listening through the 1990s. Turn to page 14 to begin your own process of discovery, and find out how you can use electronic mail to do business, solve a problem or just talk. The CompuServe Mail address is 70003,1372, if you'd like to talk to the editor.

> Douglas G. Branstetter Editor

CompuServe Magazine®, March 1990

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Let's Get Physical

Get fitness facts from your computer. Online services can keep you current on nutrition, exercise and other health matters says CompuServe's Customer Service department.

To your health: In the Health and Fitness Forum (GO GOODHEALTH) members exchange ideas about virtually any health-related issue. AAMSI Medical Forum (GO MEDSIG), sponsored by The American Association for Medical Systems and Informatics, is a forum for health professionals who wish to keep abreast of the latest computer technology in medicine.

To quicken your quest: HealthNet (GO HNT) is a medical reference source for information on doctors, diseases, first aid, symptoms, medications and more. PaperChase (GO PCH), the National Library of Medicine's online database, includes more than 6 million references from more than 5,000 journals. Health Database Plus (GO HDB) contains fulltext articles or non-professional summaries on health, fitness and nutrition from more than 1,100 general interest and professional magazines.

To get specific: The Rare Disease Database (GO NORD) contains information on the identification, control and cure of rare "orphan diseases." CCML AIDS Articles (GO AIDS-NEWS) is a comprehensive database of full-text, AIDS-related articles from medical reference books, textbooks and medical journals.

Look for information on cancer in Physicians Data Query (GO PDQ), which includes separate databases for the health care professional and the layperson. The Cancer Forum (GO CANCER) allows cancer-stricken patients and their families to exchange information and provide mutual support.

Play Ball!

pring means spring training for professional baseball, and millions of avid fans will chart the progress of their favorite players. "If only all my favorite players were on one team," sighs many a baseball fanatic. But baseball enthusiasts on CompuServe don't just dream. They do.

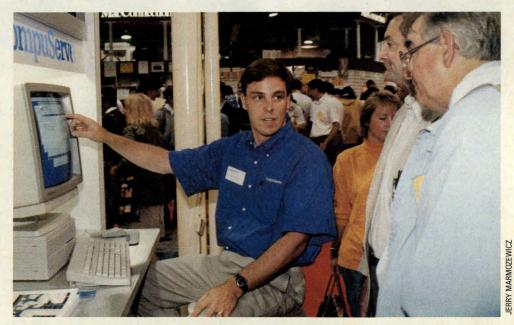
The 1990 Fantasy Baseball game is already under way in the Sports Forum (GO FANS). Forum members participate in drafts and trades until they have built the perfect team in their fantasy league. Then real-time baseball statistics determine league winners and champions throughout the season.

Members take their baseball seriously. The grand prize for the "owner" of the best team is no small potatoes, either. The 1989 grand prize was a one-week stay at the Winter Haven,



Fla., Sox Exchange Baseball Fantasy Camp, where the winner got to pitch a few with former Boston Red Sox stars.

Members contribute to the game rules, and each year's guidelines show their refining efforts. CompuServers who aim to own the next World Series winner can download file MLP90.ARC in Library 11, "Fantasy Baseball."



CompuServe Goes to MacWorld

ompuServe Live: Meet some of the CompuServe staff at the MacWorld show in San Francisco on April 11-13. Look for booth 1925 at the

Moscone Center. At last year's show in Boston (pictured), Scott Cress displayed the finer points of CompuServe Navigator.

Monitor

Edited by Gayle Brown Contributors:

Karen Aneshansley, Cathryn Conroy, John Edwards, Lindsy Van Gelder, Dan Janal, Mike Pietruk, Anthony Watkins.

BTW, FWIW, **Check This Out**

ny activity attracting a A huge following inevitably develops its own set of buzzwords and nomenclature. CompuServe's forums and conferencing areas are no exception. Some of the acronyms routinely thrown around are relatively straightforward and simple (BTW, short for By The Way), while other terminology (IMHO, or In My Humble Opinion) seemingly requires a secret decoder ring.

Some might feel this shorthand is a PITA (Pain in the Anatomy, or is it Acronym?); but most soon adopt their use and utter a blasé "OIC" (Oh, I See) when a new one is deciphered.

A picture is worth a thousand words, and leave it to clever CompuServers to create "emoticons." These icons of emotion formed by bizarre combinations of punctuation marks turn out to be pictures of facial expressions and words when the head is slightly tilted to the left. Use your imagination to detect a smile when you glance sideways at :- D or a feeling of sardonic incredulity as a ;-) flashes across the screen. Initially, it's natural to be confused and forlorn (:-<) sending an S.O. S. (...--...) for assistance in dealing with this new language. After a while, no doubt, you'll be throwing out '-) (winks) and :-J (tongue-incomments) cheek without thinking twice.

(For What It's FWIW Worth), Joan Friedman, an administrator with the TAPCIS Forum (GO TAPCIS), has compiled an exhaustive list of CompuSpeak in Library 7 (file

SMILE.TXT).





Cure Sought for Computer B.O.

t was a delicate problem, explained the lady posting the message in Section 6/Laptops on the IBM Hardware SIG (GO IBMHW). It seems that her computer had bad breath.

The computer, a Toshiba 1000, had recently been purchased from a friend who until several months ago was a very heavy smoker. The result, the new owner confessed, between chokes and gags, was that "the computer, its carrying case and all the disks that came with it smell like (ecch!) an old ashtray. I've had the case airing out on the porch for a week, and the scent has diminished a bit, but I have no idea what to do for the computer itself or the disks."

How to cure Toshiba Trenchmouth? A former smoker who seemed to know where of he wrote suggested a mild spray cleaner ("not Formula 409, it etches glass!") to clean the case and keys and regular window cleaner for the screen, both applied to a towel first. But another message poster warned that de-stinking the outside of the computer was only half the battle-that the Toshiba owner needed to find an electronics manufacturer who had facilities for cleaning assembled circuit boards and literally give the machine a chemical bath. Someone else urged bags of sachet and potpourri, but couldn't resist adding: "What a nose you must have! Hope you don't live in LA."

As for the carrying case, several SIG members recommended a new one altogether, since washing the old one would probably destroy the foam lining. The hands-down consensus on the stinky software was that the hapless Toshiba owner should copy anything that wasn't copy protected and upgrade any program that was and then maybe bury the old disks in the backyard.

When we last checked in, the owner had gone the new case route (after a long tenure on the porch, the old one still reeked of "Eau de Ashtray," she lamented). But she was still hoping to deodorize the machine and the disks. Her latest experiment was with a spray solution designed to remove odors from gym clothes.

Does your computer protect against offending? Raise your disk drive door if you're sure.

MicroSoft Chief Addresses CompuServers

While a guest in the Compu-Serve Convention Center, William Gates, Microsoft Corp. founder and chief executive officer, expressed his opinions on the direction of the computer industry and his predictions for the future. Some highlights:

- ▶ Personal computing requires a lot of packaged product software, which means there must be a clear standard for everything from the instruction set to the keyboard. The Unix world doesn't have this. The best chance Unix has is the NeXT machine. But even that will have a difficult time becoming established because standard 386/486 personal computers with Windows, Presentation Manager and such add-ons as optical disks can do most things Unix can do.
- ▶ Of the 40 million personal computers today, more than 15 million are used in the home, and that number will increase
- ▶ I believe in a computer on every desk and in every home just like I did in 1975 when I wrote that as part of the Microsoft vision. I think we will have a spectrum of machines ranging in price from \$400 to more than \$5,000.

To read the full transcript of the conference, consult the file CONFER.ARC in Library 13 of either the Microsoft Applications Forum (GO MSAPP) or the Microsoft Systems Forum (GO MSSYS).

Factbook Rates Information Services

nline information services will have a weak following among general consumers until well past the year 2000, according to the latest edition of the Information Industry Factbook 1989/90.

"CompuServe is the model to follow," says Maureen Flemming, editor of the Factbook, a 525-page almanac of tables, graphs and yearin-review articles about the online, CD-ROM and 900- and 976-phone line industries. "They have set up all sorts of special interest groups and provide technical support forums for the computer industry. They have more business services than other online services."

"Most consumer services are still very unprofitable," says Flemming. The Factbook estimates that not until 2010 will most consumer online services gain widespread use.

The newer online services have not enjoyed the rapid growth that the personal computer industry experienced because only 20 percent to 30 percent of home users buy modems, according to surveys.

Until then, Flemming suggests online information providers focus on business users.

The Factbook is available for \$195 from Digital Information Group, of Stamford, Conn., 203/348-2751.



'Doctor Mom' Finds Refuge Online

MEMBER ESSAY

t's been a long day. I'm a doctoral student, wife, moth-

er and free-lance writer. This woman's work is *never* done.

It's not physically possible. So, ignoring the dishes, I dive into the Science Fiction Forum (GO SCIFI) and find out what's happening in the Star Trek Section. Are we writing another serial message "novel" like Sweet Savage Star Trek, which left everybody involved paralyzed with laughter? Has anybody posted another parody song about the show? Have the members who work on the shows, films or

I see we're writing a mystery now, and somebody has posted a synopsis of the next episode. I have only five messages from my friends—the hilarious conference on Tuesday night must have exhausted everybody. My Indiana friend got the tape I sent, my Florida

books posted the latest news?

friend is mailing me a book, and <fiendish cackle> some-

body new to the forum just asked for a definition of one

of our nonsense words. Quick to oblige, I rapidly make up a ludicrous definition and post it, welcoming the newcomer.

When I log off I'm grinning, and life once more seems, well, maybe not reasonable ... but a lot more amusing.

Delia M. Turner Haverford, Pa.

CompuServe Magazine invites CompuServe members to compete for 10 hours of free connect time by writing a 200-word essay describing original uses for the Information Service.

Send typed, double-spaced essays to User ID 70003,4623. Please include your full name, address and User ID number. Watch for winning essays in Monitor.

Ink Problem Needles H-P Owners

Owners of Hewlett-Packard DeskJet Plus printers tend to be a schizy lot. On one hand, they're incredibly smug at the gorgeous near-laser quality they manage to churn out from a printer that's currently retailing at well under \$700 in the New York discount houses. On the other hand, there are the ink cartridges they have to buy to accomplish all this. At \$18.95, and with a life expectancy of about 400 printed pages, the cartridges can be expensive to replace.

But Hewlett-Packard Users Forum (GO HP) members recently were treated to a spate of messages on what might be called "Hardcore Hardware Hints from Heloise." It seems that the hackers have discovered a process for recycling their cartridges: Refilling them via injection by hypodermic needle or syringe with inexpensive stationery store ink (Mont Blanc and Sheaffer are the top choices). Some shoot-it-yourselfers even claimed that the injected stuff was more waterproof than the regulation HP product.

One forum member wondered aloud whether the mad re-inking of DJ Plus owners would aggravate the needle shortage and force more junkies to share. HP, he suggested, could do its part in the war against drugs by coming out with a better, cheaper cartridge.

Or, of course, Hewlett-Packard could just say no.

Mac Freeware Enhances Photos

t is said that the best things in life are free, but Macintosh software rarely is. Take photographic enhancement programs, for example. Even one of the least expensive programs, Silicon Beach's Digital Darkroom, costs \$395.

Image-processing programs, such as Letraset's Image Studio, are becoming more popular. While these programs are excellent, they're limited to manipulating black-and-white photos. If you're interested in working with color photographs, much bigger bucks are required.

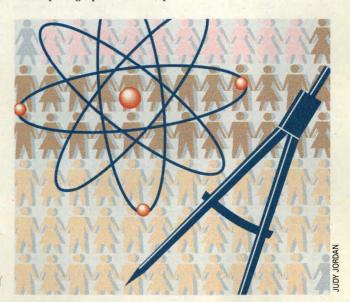
How about a photo-enhancement program that does almost everything the off-the-shelf black-and-white programs do plus works with color images and lets you colorize black-and-white photographs? Not only

that, it's free!

Tucked away in the Macintosh Productivity Forum (GO MACPRO) is a public-domain program called Image 1.17. It is located in Library 14, "Macintosh Apps," under the file name IMAG7.SIT. (You'll need the shareware program STUFFIT to unstuff the file after downloading.) The 45-page MacWrite manual does a good job of telling what the program does.

Image 1.17, developed by an NIH researcher, runs only on Mac II color systems and was designed primarily for health professionals for use with SCI-ON's image-capture board.

Before you unleash your credit card to purchase any Mac II photographic program, give Image 1.17 a whirl.



US Faces 'Techie' Shortage

The United States faces a shortage of technically skilled individuals, according to a study by a congressionally selected panel.

The panel, comprised of 48 government, business and education leaders, determined that the nation's colleges must graduate twice as many white women in science and engineering, five times as many black students and seven times as many Hispanics—starting in

The panel arrived at these estimates by combining projections from the National Science

Foundation, which foresees a shortage of 560,000 scientists and engineers by the year 2010, and the Bureau of Labor Statistics, which projects that 85 percent of new workers in the year 2000 will be women or minorities.

The panel admitted that achieving such increases by yearend would be impossible, but Sue Kemnitzer, executive director of the Task Force on Women, Minorities and the Handicapped in Science and Technology, told *The Washington Post*, "That is one point we're trying to get across—how dramatic the changes have to be."

THE ULTIMATE NOTEBOOK PC

Our new Tandy® Computer is only 6.4 pounds! With built-in software, it's ready to use instantly!

With its exclusive *instant-on word processing*, the new Tandy 1100 FD lets you take notes in seconds—a 90,000-word spell checker will then proof your work for typos! MS-DOS® and the DeskMate Graphical User Interface™ are built in for *unsurpassed ease of use*. Just follow DeskMate's proven system of pull-down menus on the *large*, *easy-to-read* 9″-diagonal screen. Unlike other notebook PCs, the 1100's battery delivers up to five hours

between charges and is easily removable so you can carry a spare. Also includes AC adapter for home or office use. A 720K 3½" disk drive and DeskMate disk software are standard, and it's ready to use with your desktop PC or printer—add a modem for easy communications. Only 2.4×12.1×9.8" and available today at all participating Radio Shack stores, dealers and Computer Centers. Tandy Computers: Because there is no better value. SM

Only \$999 Ready to go



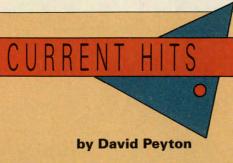
Radio Shack America's Technology Storesm

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Price applies at Radio Shack Computer Centers and participating stores and dealers. MS-DOS/licensed from Microsoft Corp.

GO OLI for more information.

Uploads



The libraries in CompuServe's forums are filled with thousands of files. The following are a few of the files uploaded in recent months. For a more up-to-date list, check the weekly "Uploads" columns in Online Today (GO OLT-3700). To locate a file that has been moved to another library, use the Browse command and a wildcard (type BRO *.ARC at any forum prompt).

AI EXPERT FORUM

(GO AIEXPERT)

Hypertext System—Black Magic Hypertext Authoring System, a hypertext system that can fuse text and graphics along with multiple link types to form hypertext/ hypermedia documents. A free runtime for any documents created with Black Magic also is available. Includes screen grabber and has a built-in word processor for text entry. File MAGIC1.ARC (287,488 bytes) in Library 16, "Hypertext/Text."

AMIGA ARTS FORUM

(GO AMIGAARTS)

Robot Combat-Battleforce, a game for the Amiga that simulates combat between two or more giant, robot-like machines. File BTF361.ARC (264,192 bytes) in Library 4, "Games

APPLE ENTERTAINMENT FORUM

(GO APPFUN)

All the Colors-A program that displays 3,200 colors on-screen simultaneously, the theoretical maximum on the Apple Ilgs. Includes a textfile explaining how this was accomplished. File MAXCOL.BNY (7,424 bytes) in Library 9, "Art Programs/Tools."

AQUARIA/FISH FORUM

(GO AQUAFORUM)

Aquarium Help—An article by J. Charles Delbeek and reprinted from the Journal of the Marine Aquarium Society of Toronto describing how to build an external protein operation. File MA0088.TXT (25,243 bytes) in Library 5, "Marine Aquaria." skimmer, plus discussion of the theory involved in its

ASHTON-TATE FORUM

(GO ASHFORUM)

Graph Utility—A general-purpose bar graph utility for dBase III and Clipper by Donnay Software. File GRAPH.ZIP (19,328 bytes) in Library 2, "dBase III/DR/Plus.

ATARI 8-BIT FORUM

(GO ATARI8)

Language Software—Draper Pascal version 2.1, the latest version of this programming language software for all 8-bit Atari systems. Program can be found in files PASCAL.ARC (30,720 bytes) and PASDOC.ARC (documentation, 31,744 bytes) in Library 3, "System Utilities.

ATARI PRODUCTIVITY FORUM

(GO ATARIPRO)

Screen Saver-Version 2.1 of Idle, a screen-saver desk accessory that makes the Atari logo spin and slide around your screen when your computer is idle. This version is compatible with all ST models and should work on any monitor. Time-out intervals and other parameters can be altered and saved. File IDLE21.LZH (9,721 bytes) in Library 6, "ACCs and Setups."

ATARI ST ARTS FORUM

(GO ATARIARTS)

Fractals-Version 2.1 of Mountains, a fractal landscape program by Matt McIrvin. Landscapes can be saved either as raw data or Degas pictures. Program enables you to manipulate landscapes by changing the apparent perspective, sun angle, water level, color palette and more. Public-domain version. File MTNS21.ARC (78,848 bytes) in Library 17, "Miscellaneous Files.

AUTODESK FORUM

(GO AUTODESK)

Animation Viewer—A utility for viewing animations created by Autodesk animator. This is a self-extracting archive file containing the player program PLAYER.EXE and a documentation file describing its use. File PLAYER.EXE (58,989 bytes) in Library 5, "Animation/-Graphics.

BACCHUS WINE FORUM

(GO WINEFORUM)

Wine Database-WINELIST, a dedicated database for MS-DOS computers for any number of wines. Shareware by Steve Skiles. Files WINLST.EXE (169,425 bytes) and WINLST.INF (information, 7,434 bytes) in Library 6, 'Cellars/Cellaring.

CBM PROGRAMMING FORUM

(GO CBMPRG)

Disk Cataloger—A freeware disk catalog program for the Commodore 128. Supports 1541/71/81 disk drives. Reads GEOS directories. Full search, sort and print functions. Supports multidrive systems. Automatically detects and loads partitioned directories on the 1581. Gives full information for all disks and files in the database. File DTS128.SDA (36,864 bytes) in Library 13, "C128 Disk Utilities.

COIN/STAMP FORUM

(GO COINS)

Lotus for Coins-Coin Catalog, a complete set of Lotus 1-2-3 templates to give you a program for collecting coins. Will work under Quattro and versions 2.0, 2.1, 2.2 and 3.0 of Lotus. File COIN12.ARC (105,080 bytes) in Library 4,

CONSUMER HEALTH FORUM

(GO GOODHEALTH)

Diet Help-Version 2.1 of Slimmer, a program for IBM PCs and compatibles with a calorie and exercise counter and food tables. Slimmer tracks calories and fat calories to help reduce cholesterol. Plots weight and caloric intake on monochrome, CGA or EGA monitors. Requires 285K free memory, DOS 2.1 or later. Runs best on hard disk. File SLIM21.EXE 178,802 bytes) in Library 10, "Nu-

CP/M FORUM

(GO CPMFORUM)

File Recovery—UNDELETE for CP/M systems, a smart file recovery utility that masks out files that cannot be recovered safely and presents a list of files for tagging with confirm. File UNDLET.LBR (9,984 bytes) in Library 2, "General CP/M Files."

IBM APPLICATIONS FORUM

(GO IBMAPP)

HyperCard for IBM PCs-HyperInk, an associative card/ page management system, similar to Apple's HyperCard. Builds electronic books and associative, interactive files. This file includes the help and tutorial manuals in addition to the application. Hyperlnk has powerful find capabilities and combines graphics and text with button functions to provide a knowledge management system. Imports text and PCX files. Graphics required. Shareware. File HYPERI.ARC (142,080 bytes) in Library 2, "Word Processing [A].'

IBM COMMUNICATIONS FORUM

(GO IBMCOM)

LAN Utility—WAIT4LAN, a startup utility for LANtastic and other NETBIOS networks. By making the appropriate NETBIOS calls and setting error levels, this utility allows a batch file to ensure that one or more servers are active before continuing a log-in sequence. Copyrighted, but free program from Ken Brown. File WT4LAN.EXE (15,113 bytes) in Library 11, "Local Area Nets [C]."

IBM NEW USERS FORUM

(GO IBMNEW)

Cribbage Partner—A rendition of Cribbage in which you play against the computer. For those wishing to learn the game, the rules are spelled out in the documentation. Pressing R at your turn causes the computer to recommend a play for you. Cribbage Partner is user-supported software from James I. Crowther Jr. File CP10.EXE (45,994 bytes) in Library 6, "General Fun and Games."

MODEL 100 FORUM

(GO M100SIG)

Appointment Manager—A program for the Tandy 200 that works with the 200's built-in alarm feature. Use alone or as an XOS-C module. File ALARM.CMD (3,212 bytes) in Library 10, "Tandy 200."

PR AND MARKETING FORUM

(GO PRSIG)

PR for Lawyers—A textfile containing ideas for lawyers considering promoting and marketing their business. File LGLMKT.STR (9,583 bytes) in Library 7, "Marketing AMA."

RELIGION FORUM

(GO RELIGION)

Astrology Calculator—An extensive, menu-driven astrology calculation program for IBM PCs and compatibles. Accurate to one minute over the period 1800-2000. Includes on-screen graphic chart wheel, saves unlimited number of charts, allows for chart comparison, searches for compatible charts, calculates list of transiting aspect times. Includes atlas module with on-screen maps of the United States and the world. Files ASTROL.ARC (268,385 bytes) and ASTROL.INF (information, 9,168 bytes) Library 8, "New Age."

WORDPERFECT SUPPORT GROUP

(GO WPSG)

WordPerfect Calculator—A calculator to use within WordPerfect 5 documents. Performs standard calculations using the add, subtract, multiplication and division operators in mnemonics and symbols. Permits use of comma, decimal points. Handles multidigit positive/negative numbers. Includes option for one to four decimal places. File WPCALC.ARC (9,472 bytes) in Library 14, "WordPerfect 5.0."

ZENITH USERS' FORUM

(GO ZENITH)

ZIP Author Conference—The transcript of "What's New with the New ZIP," a public conference with Phil Katz, held in CompuServe's Electronic Convention Center. Subjects included features planned for future ZIP versions. File PKATZ1.CO (26,372 bytes) in Library 2, "Help and Information."

David Peyton co-authored How to Get the Most Out of CompuServe, now in its fourth edition. His CompuServe User ID number is 76703,244.

AMIGA ARTS FORUM

(GO AMIGAARTS)

Text Editor—TEXTED, a former commercial text editor by Michael Sinz of MKSoft now released as shareware. Pull-down menus as well as keyboard support for almost every feature. Program and documentation included. File TEXTED.ARC (48,128 bytes) in Library 10, "Applications."

ATARI PRODUCTIVITY FORUM

(GO ATARIPRO)

Terminal Emulator—A VT-52 terminal emulator program for the Atari, written in BASIC. Contains an auto-dialer. Allows for ASCII uploads and downloads. File BUDDY.BAS (2,705 bytes) in Library 2, "Telecommunications."

BORLAND APPLICATIONS FORUM

(GO BORAPP)

Planner Dump—A program that dumps all information from your Sidekick Plus time-planner file to the screen, printer or a file. File PLUSPL.ARC (15,890 bytes) in Library 2, "Sidekick Plus."

EPSON FORUM

(GO EPSON)

Equity Utilities—Collection of helpful utilities for the Epson Equity II, courtesy of Epson America's Advanced Products Division. Most are fixes to Hercules video mode. File E2UTIL.ARC (9,984 bytes) in Library 7, "Equity Files."

GAMERS' FORUM

(GO GAMERS)

Fun With Goddesses—A collection of fun things to do in Infocom's *Leather Goddesses of Phobos* submitted by forum members. None is necessary to complete the game, but some give broad hints on how to solve it. File LGOP.FUN (10277) in Library 2, "Adventure Games."

OLDIES BUT GOODIES

by David Peyton

Following is a list of files uploaded to CompuServe forums more than a year ago that have won the right to be called "oldies but goodies," either by the recommendation of forum administrators or by the number of downloads each file has received.

IBM APPLICATIONS FORUM

(GO IBMAPP)

Readability Tester—PC-Style analyzes documents and provides information on readability. Statistics provided include words per sentence, percentage of long words, percentage of personal words, percentage of action verbs and syllables per word. Shareware. File PCSTYL.ARC (105,846 bytes) in Library 1, "Text Editors [A]."

IBM NEW USERS' FORUM

(GO IBMNEW)

Graphics Aid—SHWGIF displays raster-image files for IBM PCs and compatibles, the PCjr and the Tandy 1000, among others. Requires a CGA, EGA or AT&T graphics board. This version supports Hercules Monochrome, Tseng Labs EVA480, Ahead Systems EGA 2001 Plus and Video Deluxe. File SHWGIF.ARC (10,610 bytes) in Library 2, "Library Tools [N]."

MACINTOSH PRODUCTIVITY FORUM

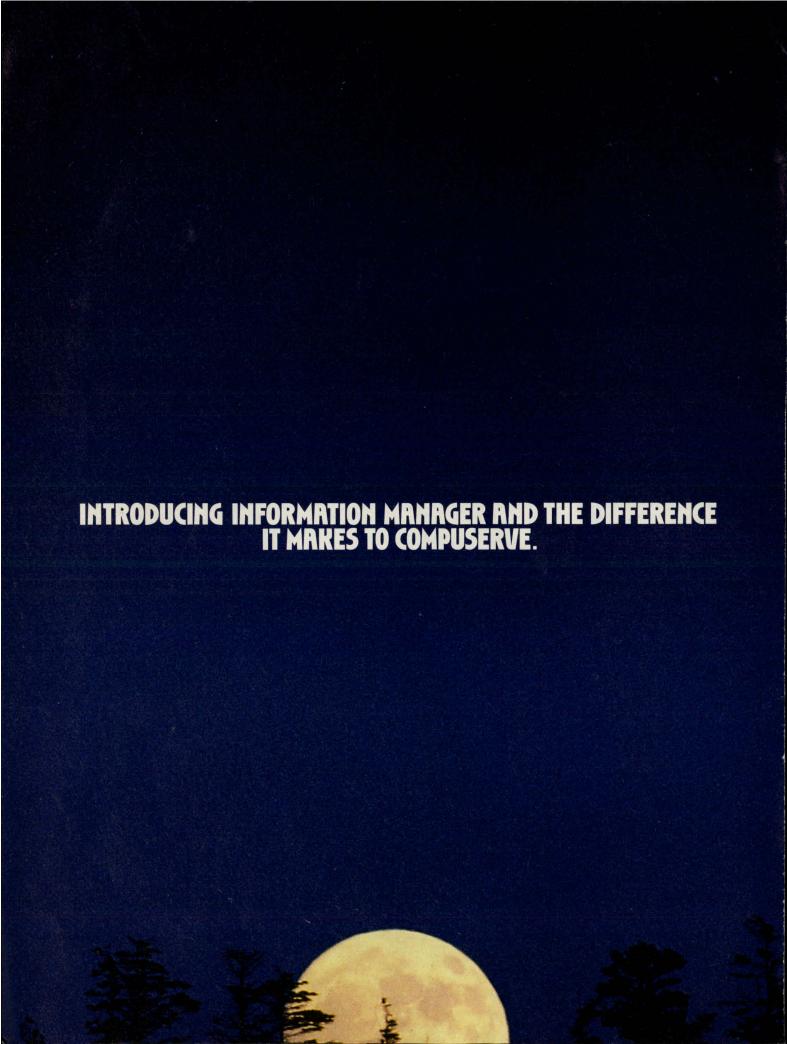
(GO MACPRODUCT)

Shuttle Views—A MacDraw document that shows the space shuttle in various views. It and an associated file are part of research that Don Gilman put into his program from Spectrum Holobyte. Files SHUTTLBIN (12,672 bytes) and SHUTTLDOC (56,960 bytes) in Library 2, "Word Processing."

TAPCIS FORUM

(GO TAPCIS)

Message Collector—TapOrder, a program that allows you to consolidate multiple TAPCIS online sessions into a single, properly-threaded message collection. Flle TAPORD.ARC (84,970 bytes) in Library 2, "Scripts and Tools."



CompuServe Information Manager revolutionizes the way you'll work with our online service and your MS-DOS personal computer.

You'll see the difference immediately, in its windows-like environment, pull-down menus, dialog boxes, and uncomplicated commands. CompuServe Information Manager lets you see and manipulate multiple windows on your screen to track where you've been, chart where you're going, and have quick access to multiple information sources.

Forums suddenly become easier to use and follow, as you can find topics, track messages and additions, and search files more efficiently than ever before. And a new map capability lets you see who's talking to whom.

It makes CompuServe even more unique by helping you work offline to compose messages and take advantage of the power of your personal computer. So you save both time and money. No other service can promise you that.

Initially, Information Manager and its users guide is being offered to CompuServe members only at an introductory price of \$24.95. This includes a \$15.00 usage credit. To order, simply type GO ORDER at any ! prompt.

Add the MS-DOS version of Information Manager to your CompuServe service now. A Mac version will be released this spring. The difference it makes will be like night and day.

CompuServe[®]

People Power Mail

When it absolutely, positively has to be there yesterday, electronic mail is the only way to jump the international dateline, or any other line, physical or political.

Eastern Europe thunders with the demise of the Berlin Wall and cries for democracy as their Western European counterparts pre-

pare for economic superpower status in 1992. China continues its crackdowns on student protesters as the Soviet Union moves to broaden personal freedom, and South Africa waffles back and forth between oppression and rapprochement with

its non-white citizens.

Hong Kong financiers are getting ready to trade the British crown for a suit of Mao blue, while Canada and the United States begin to feel the effects of a precedent-setting free trade agreement. Everyone is racing to beat the AIDS demon, and a few are dreaming that this is the decade we head back to the moon and to Mars.

If there's one glue that can keep this whole world from splintering into a thousand fractious pieces, it's communication. Wherever it's been nurtured, communication has helped turn a profit, topple a government, save a life, tickle a fancy.

Electronic mail may well be the communication that keeps the world talking and listening through the 1990s and prepares us for the next hundred years. As this online genie grows from curiosity to commonplace, the creativity of the millions of ordinary people who click a mouse or tap a Control key will be making e-mail jump through hoops no one even knew existed a few years ago.

Nowhere is there better evidence of such creativity in action than the urgent message program of Amnesty International.

"We work on life-threatening cases. The faster we react to crises, the more effective we are," says Scott Harrison, who calls on everything he can to stop the clock. He knows that every minute saved can buy freedom sooner for the world's prisoners of conscience.

The most critical have "urgent message" status, and Harrison gives them the strongest medicine he has: electronic mail.

AI is a London-based human rights organization that works for the release of nonviolent political prisoners and an end to government-sanctioned torture and the death penalty. At the American office in Boulder, Colo., Harrison receives 3,000 to 5,000 case sheets a year describing the plights of prisoners being held incommunicado, tortured, deprived of medical care, de-

FEATURE

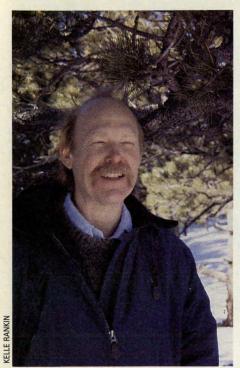
CM's Cover Story:

Lick Problems, Not Stamps!

It's Easy to Hard Copy Learn How: page 19

Programs that Deliver More than Mail, p.20





Works on life-threatening cases: Harrison

tained without legal aid or just disappearing from sight.

"We get information on arrests and detentions from the

London office daily," Harrison explains. "Several hundred people there research cases and gather information from human rights groups, church workers, families and defense attorneys, and package it into case sheets. They send all of these electronically to more than 90 countries where Amnesty International has organizations.'

Harrison and staff design a response for each of the cases that come through and route the information throughout all of their American groups and potentially interested organizations. "We send out urgent appeals to American teachers' unions, for example, to the Bar Association, which has its own human rights group, and journalists," he says.

"We then post the urgent appeals to several bulletin boards, including Peacenet, Bitnet and CompuServe (GO ISSUESFORUM), where users download them and send their own e-mail appeals to appropriate government officials. We can react within hours of an arrest and possibly help prevent torture.

"CompuServe was the first service we put

FEATURE

ourselves on," he says. "It's great for us and great for the prisoners because we don't have to (pay dues) on Compu-

Serve. People are encouraged to write letters, but they don't have to join our organization. They can just participate in the letter writ-

"People power" organizations such as Amnesty International are just one facet of electronic mail's meteoric rise. "In a real sense, people began using e-mail at the beginning of this decade," says Mike Cavanagh, executive director of the Electronic Mail Association. "It's a child of the

The EMA has watched its child climb out of the cradle and lace up its running shoes. A trade association of both users and vendors, it was founded in 1983 by eight firms, and today has about 180 corporate members, Cavanagh reports. About 42 percent of the members are user companies, while the others, including CompuServe, are e-mail providers. Its board of directors includes such member firms as Procter & Gamble, DuPont, Citibank and the American Bar Association.

Statistics from the industry publication

A Father and Son Reunion Only an E-mail Away

Robert Switzer has been searching for his two sons for 29 years, but it was an electronic mail message on CompuServe that finally reunited them.

Switzer had lawyers, law enforcement officials and Social Security workers searching for his sons. As a traveling salesman of video equipment, he would check the phone directories of the towns he visited. "I've made a lot of calls," he told the The Tucson Citizen. Now a product marketing director for a keyboard manufacturing company, Switzer continued his seemingly fruitless search.

Then his wife suggested he search CompuServe's member directory for sons Robert Jr. and John Lee Switzer. After locating a John L. Switzer, he sent a CompuServe Mail message asking questions about birthdates and other personal matters. He waited through the holidays, but got no response.

In January, he got two messages. One was a rather cryptic message that John sent thinking he was responding to his brother, who had recently become a CompuServe member. The other message was more to the point.

John wrote back, "Bob, I hope you are who I think you are. If so, my brother and I have been searching for you for a long time."

After making contact with John, Switzer arranged a conference call with John, Robert Jr. and his daughter Michele, 29. "They picked up just like they left off last week," Switzer says. Michele was an infant when the boys were taken away. "We had billions of questions."

Switzer won custody of his two sons after divorcing his wife in Alabama. His wife took the boys to Oregon, where she remarried and changed the boys' last names. Switzer also remarried and moved, first to California and later to Tucson. He never stopped searching for his sons, whom he had last seen at ages 4 and 5.

John and Robert Jr. changed their names back to Switzer at 18 and have been searching for their father ever since. "The ironic



CompuServe reunites father, sons in Tucson: The Switzers

thing is I was worried about not preserving the name," Switzer says. Switzer is proud of both of his new-found sons. Robert Jr., 35, is a Postal Service employee in Ontario, Ore. and city council member who is considering running for mayor. He has two children, ages 8 and 12. "In a matter of seconds, I became a grandfather," Switzer says.

John, 34, is an Army major stationed at Fort Sheridan, Ill. He plans to attend law school.

Switzer and wife Jean enjoyed a happy face-to-face reunion in time for his 55th birthday. "What a birthday present," Switzer says. "I guess it was meant to be. I don't know how else you'd put it."

Electronic Mail and Micro Systems testify to e-mail's supercharged growth spurt. Eric Arnum, editor of EMMS, plots the surge squarely in the mid-1980s.

"The number of mailboxes grew from 430,000 in 1980 to 1 million in 1984 and 8.6 million in 1989," he explains. "It really took off in the last five years, with a massive jump in one year, between 1985 and 1986; a 210 percent increase in private mailboxes and 50 percent for public services such as Compu-Serve. It continues to grow 25 percent to 50 percent each year.

"The number of messages transmitted lags behind slightly," Arnum adds. "Up from 1.6 million in 1985, you can estimate at this moment that 1.5 billion messages are sent annually."

"In the beginning," says Cavanagh, "you probably weren't going to use e-mail if you didn't have a personal computer. I think we all knew that electronic mail existed, but what's really happened is that the personal computers or office automation that gives people the link has been showing up on desktops with increasing frequency."

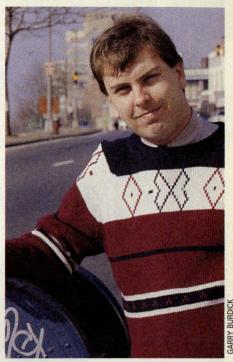
Arnum has kept an eye on the other e-mail services worldwide, watching for signs of industry growth abroad. He sees an imbalance in e-mail use, comparing overseas volume with that in the United States, but predicts that it will be a quick game of catch-up.

"E-mail has been a slow starter overseas," Arnum says. "Other countries are three to four years behind the United States in the growth curve, sort of on the knee of the curve." (See "Strands Across the Water," below.)

"At least 30 countries have the infrastructure to do this, though," he adds. "In terms of technology they are our peers. Like the United States in 1984-85, these countries have the carriers but they don't have the customers. They're poised, though, to do in the 1990s what the United States did in the '80s."

Arnum places Canadian capabilities as close to those of the United States and points to Italy as a country rapidly putting services such as hotel and airline reservations online. The Soviet Union's *Novosti*, a daily digest of news and opinion, is available in the United States as well as Europe. France and England have been quick to computerize databases, he reports, although electronic mail is lagging.

"What you have is an industry pulling



Editor tracks surge in e-mail use: Arnum

Strands Across the Water

Worldwide connectivity is the name of the game, and hooking up with private and public electronic mail services will be the next big step in making e-mail as common as the telephone.

"Connectivity is the industry's key issue for the day," says Dave Bezaire, CompuServe Mail product manager. "International standards bodies are working on it, and within 12 months we should see that the ability to send messages to users on other services will be more farreaching. In another 12 to 18 months, it will be commonplace.

"Today most folks are past the protectionism stage," he adds. "The obstacle is technical capability."

Paul Watson uses his CompuServe Mail connections to make business in Japan and other countries productive and pleasurable. "I like to make contacts via CompuServe for countries I plan to visit," Watson says. "That way, when I visit another country, I already have friends there. I now know four people in Japan with whom I exchange books, videotapes and magazines.

"As a software developer I also can find out what machines and software people are using or need. I can get technical information about equipment and compatibility issues."

Carl Phillips relies on computer and fax links to Asia and Latin America to build his Phoenix-based investment firm, CENPAC Securities. Specializing in the Pacific Rim countries, CENPAC brokers simply can't get by relying on regular mail service, Phillips says.

"We can get a fax out of places like Borneo, where getting mail

out is a problem," he explains. "We have loads of traffic both ways, anywhere from three to 20 faxes a day to sell stocks, bonds and special investment products in Singapore, Mexico City, South and



Connectivity is key issue of the day: Bezaire

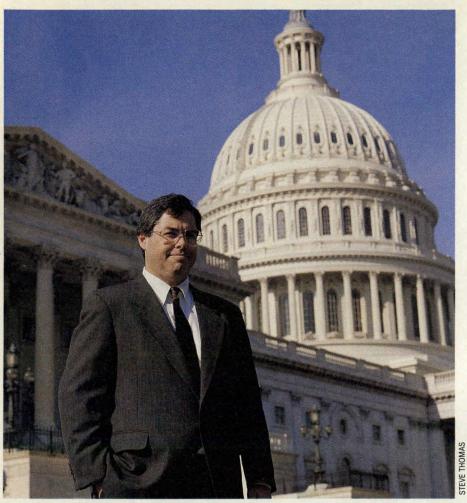


E-mail makes business pleasurable: Watson

Central America, and Europe.

"Not only does it save us a lot of money on express mail, it simply makes it possible for business to get done. You don't have to put business on hold until people get hardcopies of important documents. It used to be with the mail that, with a little luck, in three weeks things might happen. Now it's instantaneous. It really picks up the pace of closing deals."

-MJM



FEATURE

"Electronic mail is a child of the '80s": Electronic Mail Association's Cavanagh

things into place," says Cavanagh. "The move to universal connectivity is on.

"Look at it this way, it took the phone company 40 to 50 years to make the tele-

phone the medium of choice," he says. "Forty years after its invention, people still used to send telegrams for great events or tragedies. That didn't mean that

the telephone was a failure."

It did indeed take a while before Alexander Graham Bell's invention became a familiar site in homes, businesses and corner phone booths. In that respect Cavanagh believes that technology has already given birth to a device that will make e-mail as commonplace as the phone call.

> "There is an e-mail booth on the corner already," Cavanagh says. "It's the laptop. People, especially sales

and marketing reps, are given laptops and go out and make their calls. In the evening they hook it up to the telephone at their motel and send in the data. The laptop is really going like wildfire."

Back in Boulder, predictions for tomorrow are waved off to concentrate on what's happening now. Amnesty International has a fresh batch of urgent message cases that need to be sent out immediately to prevent human lives from being lost today.

"We're working on eight cases today," Scott Harrison reports. In Guinea, for example, there are six people being held and possibly tortured.

In Bolivia, there are two lawyers who have been threatened with death, in Peru five educators and one health worker. There are death penalty cases in Malaysia and Texas. In Turkey, three opposition candidates are in danger of torture, and in Cuba there's a follow-up for three human rights activists.

Harrison will upload these cases to Amnesty International members around the country. Then, he hopes, this volunteer army will produce a flood of CompuServe Mail messages, faxes, telexes and postal letters that will speak for the conscience of thousands and thousands of people in America and overseas.

Maura J. Mackowski is a free-lance writer based in St. Louis. Her CompuServe User ID number is 76004,2243.

CompuServe Mail Tips

Note the line-length limitations. For example, CompuServe's 60-character line limit for postal letters can be a twist to the 80-character line limit that is used for electronic mail messages.

Don't forget to put a space between the >TLX or >FAX and the machine number. For example, >TLX 6143762848 when sending a telex or fax message. Leaving out the space means your message won't be sent.

Compose offline and upload to save connecttime charges, and use the Address Book feature. It saves time and gets the address right every time.

Check the cost of transmitting your message when the system displays it along with address information. If it's too much, you can use the Edit function from the CompuServe Mail menu to delete lines and shave pennies from the final transmission price.

Type HELP FAX, HELP TELEX or HELP POSTAL at the main CompuServe Mail prompt for a concise file that will help you create and edit a message in the correct format.

Insert a semicolon between User ID numbers when sending a message to multiple recipients. For example, TO: 70001,1010; 70001,1111;

Type FILE at the Send prompt to save a copy of your message. You can retrieve these files later to edit or send.

Type NEWS at the CompuServe Mail main menu prompt to learn about the latest enhance-

HOW TO SEND A HARDCOPY

CompuServe offers three hard-copy options for electronic mail users: postal delivery, fax and telex. Not everyone has access to electronic mail (at least not yet), so you can use any of

these options to send a laserprinted letter, fax or telex transmission without licking a stamp. CompuServe members already have discovered a number of unique ways to make use of this latest in electronic communication:

Retired American Foreign Service officer John Ausland uses CompuServe Mail, Internet fax and MCI Mail from his home in Oslo, Norway, to research and write about foreign policy and military matters, particularly about the Soviet Union.

Eduardo Salom of Software

Plus in Buenos Aires supplies process control systems to the metals industry via Compu-Serve Mail and fax. He maneuvers around Argentina's shaky mail and telephone systems to cut communications time between other South American countries and the United States from one week to one day.

CompuServe Mail messages can be sent as printed, addressed letters or to any fax or telex machine worldwide. For details on these hard-copy options and others, see the following:

FORMAT

COMMAND

COST

MAXIMUM SIZE

▶ Postal Delivery: Sends laser-printed business letters to any mailing address.

Format: The following Control-key commands can be included in your file: [CONTROL-L] for page breaks, [CONTROL-M] for carriage returns and [CONTROL-I] for tab spaces. System prompts for addresses of sender and recipient.

Command: >POSTAL (type at Send prompt).

Cost: Domestic, \$1.50 and international, \$2.50 for the first page; 20 cents for each additional page.

Maximum size: Five pages or 279 lines.

▶ Fax: Sends fax transmissions through CompuServe Mail to any Group 3 fax machine.

Format: Use [CONTROL-L] for page breaks.

Command: At the Send prompt, type >FAX 123 1231234 (area code and phone number); for international, type >FAX 0114 4112345 (011 is the international access code and should always come first. Add country and city code and phone number.)

Cost: Domestic, 75 cents for the first 1,000 characters and 25 cents for each additional 1,000 characters; international costs vary. Type HELP FAX INTERNATIONAL for a list of valid country codes and transmission costs for each location.

Maximum size: 50,000 characters at 55 lines per page (approximately 11 full pages).

▶ Telex: Sends messages to (or from) any Telex I or II machine from (or to) any CompuServe Mail address.

Format: Do not insert page breaks or other control characters.

Command: Type >TLX 12345 (machine number)

Cost: Domestic, \$1.15 for every 300 characters; international costs vary. Type HELP TELEX INTERNATIONAL for a list of country codes and transmission rates for different locations.

Type HELP TELEX RECEIVE for information on how to receive a Telex in your electronic mailbox. Maximum size: 50,000 characters.

by Charles Bowen and Michael Naver



Offers pull-down menu ease: CompuServe Mail



Text editing, word-processor compatibility: Information Manager

Programs that Put Punch in Your E-Mail

FEATURE

To enhance the electronic mail service, some users of MS-DOS systems are turning to the new CompuServe Information Manager (CIM) communications software, which supports offline reading and writing of messages.

For instance, this windowslike interface, which incorpo-

rates windows and pull-down menus and supports a mouse as well as keyboard commands, provides "in" and "out" baskets on your computer disk for notes and messages.

When messages are delivered to the online mailbox, CompuServe Information

Manager saves you time and money through a "Get All" option that can move all the messages to the In-Basket on

your disk. You then can disconnect from the system and, from a pull-down menu, select

AutoSIG and TAPCIS Team Up with C-Mail

AutoSIG, a freeware program for IBM PCs and compatibles, saves you online time and money by automating your use of forum message boards and CompuServe Mail. It logs on to CompuServe for you, selects messages of interest, downloads them and logs off. You can read and reply to messages offline using AutoSIG's text editor. AutoSIG then goes online again and delivers your messages to the right areas.

You have the option of having retrieved messages deleted from your mailbox, or AutoSIG will download but not delete them.

Options for composing or reading messages also include timesaving features. You can create a copy of any message you send for your files and save a copy of any message sent to you. Waiting binary mail, such as a spreadsheet, is automatically treated as a binary file.

The AutoSIG User ID Address Book works the same as in CompuServe Mail. Just add your name to the CompuServe Mail Address Book to get started.

AutoSIG has gone through several updates and enhancements in its six years of operation. The current version, ATO*.ARC, is available for downloading in Library 1 of the IBM Communications Forum (GO IBMCOM), where you also can download the 95-page manual and some helpful scripts. AutoSIG also has online help screens to come to your rescue.

TAPCIS provides automated access to messaging activities in CompuServe Mail or in the forum message areas for users of IBM PC, PC-XT, PC-AT, PS/2 or close compatibles.

You can define up to 20 forums for TAPCIS to scan for messages, with up to 15 forums active at any time. You can define your forum use to read all new message "threads," to "quick scan" subjects and to read messages sent to you.

Message sections in the forums can be selected when you define forums. Available forum section numbers and names are presented in a pop-up window.

A split-screen editor lets you write your messages offline, free of connect charges. The editor has word-wrap, and a cursor and editing commands similar to those in WordPerfect.

You can compile an address book as you read messages, so you can send messages to other CompuServe members without having to remember their User ID numbers. You can print your incoming messages, save them to a file, retrieve a file into a message you're writing, or search your files for message text.

The program automates the task of replying to a message, forwarding a message to other users via CompuServe Mail, or sending a reply to a different forum or to CompuServe Mail.

You're encouraged to download TAPCIS, a shareware program, from the TAPCIS Forum (GO TAPCIS) and try it for 21 days. If you decide to use it, you pay a \$79 registration charge, and receive the program disks, a manual and continuous support, both online in the forum and with regular free updates to the program.

the In-Basket option, which causes the software to display a menu of received messages, showing the subject, author and date of each. You can open any message by highlighting it with the bar cursor and pressing the Return key.

When a message in the In-Basket has been opened, the software displays the message along with options for handling it, including those to edit the original message, to compose a reply to the sender, to forward the message to another subscriber along with a comment from you, to save the message on your disk and more.

Composing messages and replies can be done offline as well as online. When you want to write a message, the program opens a dialog box with edit fields for the recipient's name and CompuSer've User ID number, the subject of the message and the address of anyone you want to receive a "carbon copy" of the message.

The cursor then is positioned in a text composition area, where you start typing. It operates like most modern word processors. When you reach the end of each line, the text automatically "wraps" after the last word that fits and the cursor moves to the next line. Editing the composition is easy; just move the cursor with the Arrow keys and insert or delete the changes.

Once you are finished writing and editing, the program lets you either send the message immediately or save it for later delivery. The Send-Now option works whether or not you currently are connected to the system. (In other words, the program automatically logs on if necessary.) If you are not ready to send the message—if you want first to compose other replies or read other messages—you can place the message in your Out-Basket, an area reserved on your disk storage. The software lets you send either selected messages or all your outgoing messages at once from a pull-down menu.

CompuServe Information Manager also supports other electronic mail enhancements, such as a "Filing Cabinet" on your disk for copies of messages and an Address Book for keeping names and User ID numbers of frequent correspondents. The software also simplifies the sending of binary files through electronic mail and even assists

TO ORDER COMPUSERVE INFORMATION MANAGER

CompuServe Information Manager costs \$24.95 (includes a \$15 CompuServe usage credit) and is available through CompuServe's Online Ordering service (GO ORDER).

in writing notes offline for delivery to forum message boards.

The MS-DOS version of CompuServe Information Manager costs \$24.95 and includes a \$15 usage credit. It requires an IBM

PC or compatible with 640K total memory, a hard disk and a Hayes-compatible modem. The Macintosh version of the program will be available in mid-1990. For more information, type GO ORDER at any prompt. ◀



Does how you say it affect what you have to say?

Form really is a part of function. Especially when it comes to interpreting a written message.

One half of this ad is an example of an ordinary CompuServe Mail message in text format. The other half is an example of what you can do by effectively using CompuServe Mail's binary file capability.

You can format a message the way it's meant to be read. With a typeface that enhances your message. Italics to stress meaning. Columns that won't crumble. And bold text to layer information.

Which is all to say that any message will print on a recipient's laser printer just as it would on yours.

All we require is that the receiver have the same--or compatible—software package with which you create the document.

CompuServe Mail lets both sender and receiver be editor.

Let's say you've just prepared the final draft of a newsletter. You upload the file to CompuServe Mail and send it to your client. As long as she has the same desktop publishing program that you have--not too tough these days—she can download the file, see your message in its original format, and edit it onscreen.

CompuServe Mail. When the shape of your message is as important as its substance. Enter GO MAIL at any! prompt.

CompuServe

Modulator/Demodulators Revealed

In the market for a modem? CM's Reviews Editor offers CompuServers a buyers' guide.

In some ways, buying a new modem is simpler than it used to be. In other ways, it has become more complicated. The thing to remember is that virtually any new modem will work with CompuServe, but special features provide improved performance over "bare bones" modems. This article provides hints about picking a direct-connect modem for operation at the 300 to 2400 bits-persecond (or baud) speeds CompuServe supports without having to go to a hardwired network connection.

AT Command Set

Some simplification came when modem manufacturers adopted the Hayes "AT" or

"attention" command set as a standard. Before that, manufacturers often used their own modem commands, so software and modem combinations had to be chosen for mutual compatibility. Then some software developers started supporting only Hayes commands, most often for integrated applications with built-in communications, and the pressure to be compatible fell on modem makers.

Today a handful of software packages still support special commands for other than Hayescompatible modems or for modems having dual command sets, but almost all programs and new modems recognize at least a basic AT command set.

Buyers should have no problems obtaining Hayes compatibility without being limited to specific brand names. If a modem recognizes AT-style commands, there should be no in-

surmountable problems with popular commercial, shareware or public-domain communications software. Still, it doesn't hurt to ask before buying just to be sure a modem supports the AT commands.

Modem Speed

Most members who joined CompuServe

during its infancy started with 300-baud modems, which was the best speed available at the time. Since then, many have retired those slow modems in favor of 1200- or 2400-baud models that greatly increase the information moved during online sessions.

But 300-baud modems have not died out completely. They're still being made, and many people buy them when first starting to telecommunicate because they are less expensive and can get a user online with the lowest possible startup cost.

Yet a cheap, slow modem may be a false economy. Casual communicators may not mind working at a snail's pace, but business and professional people must achieve a return on their working hours, computer time and connect time.

Under ideal conditions, stepping up from 300 to 1200 baud should roughly quadruple the "throughput" or the amount of data flowing through the modem, and jumping to 2400 bits per second should double that. Raw connect-time charges also increase, but not proportionally. For example, CompuServe's hourly rates double from 300 to 1200 baud, but remain the same for 1200 and 2400 baud.

Assuming it takes one hour to transfer a certain data file with a 300-baud modem and no slowdowns, CompuServe's connect charge would be \$6 at the 300-baud hourly charge. Moving the same data at 1200 baud might take just a quarter hour and cost only \$3.13 at the \$12.50 hourly charge. At 2400 baud, the time could decrease to an eighth of an hour, with the cost dropping to \$1.56 at the same \$12.50 hourly charge.

Of course, that assumes maximum data transfer rates and unobstructed data flow, which aren't always possible. Like other publicly accessed systems, CompuServe slows as usage increases. As more users come online in the evening hours, the advantages of faster modems evaporate.

Similarly, people in activities such as online conferencing spend considerable connect time waiting for remote responses. Here, a 300-baud connection sometimes can be as cost effective as a 1200- or 2400-baud connection.

Because modern modems often support multiple speeds, some people use the fastest speeds when the CompuServe host is highly responsive, but switch to lower speeds when the system slows or when they're involved in activities requiring long online waits.

COMPUTING SERVICES

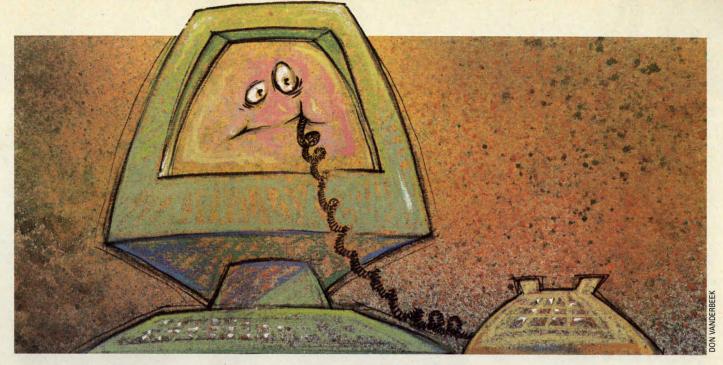
CM's Computing Services Credo:

For those who call out for advice, answers, even mere companionship in a discomfiting computer world, we throw you the online rope that connects to the main. No man is an island unto himself. Herein the Control-G tolls for thee.

Modem Poll: What to Look for When You Buy

Apple Forums Branch Out Again, page 26

A New Window Treatment for Microsoft, page 27



Internal Versus External

Deciding between an internal or external modem often is a matter of personal preference, but each type has distinct advantages and disadvantages.

For a single computer, the convenience of an internal modem is appealing. It is out of sight, takes no additional desktop space and needs only a telephone line to complete the physical connection. An external modem takes up desk space and needs a telephone line, a modem-to-computer interface cable and a power connection to a wall outlet.

Yet the fact that an internal modem draws power from the computer can be a problem for older computers with undersized or weakened power supplies or for systems already loaded with internal devices.

Internal modems also impose certain hardware requirements. Among IBM-compatible computers, internal modems need uniquely assigned "interrupt request" levels and uniquely assigned serial or "COM" ports. Interrupt request levels rarely are a problem except for computers having numerous devices demanding the same interrupts, but most internal modems have provisions for resetting the interrupt level to work around conflicts.

Serial port assignments tend to be more crucial. Among IBM compatibles, many internal modems work only as COM1 or COM2 devices, which may be the same port assignments needed by serial printers, plotters or mice. A modem capable of operating on COM1, COM2, COM3 or COM4 often is preferable to one that can operate only as COM1 or COM2 and gives the buyer flexibility in

working around other system needs. However, while an internal modem may be designed to access COM3 or COM4 ports, not all communications software can do likewise. To be usable, both hardware and software must be able to access the same port assignments.

Internal modems are computer-specific, so each model works on a single type of computer. Since external modems connect to a separate serial port in a computer, they are more mobile and can be moved from machine to machine simply by reconnecting interface cables. That gives the external modem an edge in multicomputer installations, though not all business users will want that mobility. For one thing, freestanding external modems are easier to pilfer.

Since they are computer-specific, internal modems usually come with some telecommunications software. Although it may not be the best software available and may be replaced later, it at least gets a user online quickly and without additional expense. On the other hand, because external modems are not targeted to specific computers, they rarely come bundled with any software. So buyers usually have to allocate additional funds for third-party software.

MNP or Non-MNP Operation

Perhaps the most touted innovation in modem technology in recent years is Microcom Network Protocol. Available in highend, more costly modems, MNP operation comes in five levels or classes of modem-

controlled error checking and correction. The highest level (Class 5) also provides data compression that effectively doubles the throughput speed of the modem.

To be useful, the modems at both ends of a communications link must be equipped for MNP operation and must use the same MNP class. If the receiving modem is incapable of MNP operation at a level matching the calling modem, the calling modem must be able to "fall back." The preferred sequence is, upon detecting an MNP problem, to first fall back to a lower MNP class, then fall back to non-MNP operation at the original speed if that doesn't work, and finally fall back to a slower speed if all else fails. But not all modems follow that sequence, and some fall back directly to non-MNP operation at a slower speed.

CM's Modem Buyers' Checklist

- ► Make sure the modem has Hayes AT or "attention" command set. Most do, but check for good measure.
- ➤ Your best bet is to choose a modem with variable bits-persecond speeds, from 300 to 2400 baud. Varying speeds boost efficiency and economy according to task and network conditions. A cheap, slow modem is a false economy, especially for dataintensive transmission jobs such as downloading programs.
- ➤ The choice between an external or internal modem is mostly a matter of personal preference. Caveats: Internal modems impose hardware requirements and draw power from the computer, which can pose problems for older computers with undersized or weakened power supplies, or for systems already loaded with internal devices.
- ▶ MNP or Microcom Network Protocol modems are expensive high-end devices that offer modem-controlled error-checking and data-compression features. There are many complicated considerations and caveat emptors associated with these units. Carefully read the MNP section of the article accompanying this tip box before purchasing an MNP modem.
- ▶ Beware the sales pitch. Some modem sellers boast full-duplex, half-duplex transmission, automatic speed adjustment, asynchronous operation and auto-dialing—all standard features found on almost any modem. Other features, such as call-progress detection and signal conditioning are valid add-ons and worth consideration.

The wrong sequence can cause problems for some systems and software.

Many 2400-baud CompuServe nodes are equipped to handle MNP calls up to Class 4 error correction, but they do not accommodate Class 5 data compression. CompuServe members are cautioned not to expect an MNP Class 5 modem to increase data transfers to a 4800-baud throughput rate on a 2400-baud CompuServe node. (To find out if a particular node will handle MNP communications, type GO PHONES on CompuServe and look for an "M" next to the network designation for the phone number.)

Prospective buyers should be wary of potentially misleading advertising. At least one supplier advertises a "4800 baud" modem with MNP Class 5 saying it handles "300, 1200 and 2400 baud too." In fact, it's a modem that achieves a 4800-baud throughput only if MNP Class 5 data compression is in effect. Otherwise, it operates at a top speed of 2400 baud and is merely a 2400-baud MNP modem.

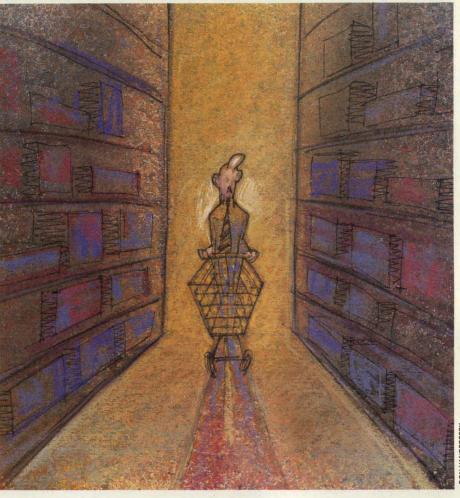
Buyers also should watch out for claims that MNP eliminates the need for software protocols. Although error detection and correction is handled by the hardware, this does not mean the user can go completely without protocols in software. On CompuServe, MNP error handling is most effective for simple, straightforward ASCII sending and receiving, and it does a marvelous job of eliminating stray characters and transmission errors from CompuServe Mail messages, forum messages, library file descriptions and online conferences.

However, a software protocol of some form is required on CompuServe to upload or download binary files, whether or not an MNP "reliable link" is used. XMODEM, YMODEM, Kermit, CompuServe B, Compu-Serve B+ and CompuServe Quick-B protocols are not designed for optimum MNP op-

erations and do redundant error checking that can actually slow file transfers. When one of those protocols is

needed, CompuServe B+ seems to be the best choice for an MNP reliable link.

As a result, MNP-capable modems may not be as effective for CompuServe members as for other users. Anyone considering such a modem also should consider the relative proportions of CompuServe and non-Compu-Serve connect times and the types of communications used most often. The extra cost of MNP capabilities may be worthwhile to people who spend most of their connect time sending and receiving ASCII text, but not to those who handle mostly binary files and are tied to software error checking anyway. Even if an MNP modem is selected, it may be advantageous to set up separate MNP and non-MNP log-ons to accommodate different sessions that involve predominantly ASCII or predominantly binary communications.



Other Features

COMPUTING

/ICES

There are numerous other features that various manufacturers tout, but few will make or break any particular modem. In fact, many are standard features found on almost any modem. For example, full-duplex or half-duplex transmission, automatic speed

adjustment, asynchronous operation, automatic dialing and automatic answering all are expected of a modem in

any price and performance range.

Adaptive pulse or tone dialing seems important only if a modem frequently is moved from one telephone system to another. Automatic adaptation lets the modem dial on any line without the user having to alter dialing instructions in software log-on scripts. But if a modem is installed in a fixed location and accesses just one telephone line, it's just as effective to set the dialing style in the software and bypass the adaptive feature.

Yet other features are worth special consideration. For example, when introduced a few years ago, call-progress detection was a major selling point for some modems because it let communications software and users know when a call did or did not complete and allowed appropriate actions to be taken for lack of dial tone, busy signals or connection.

Today most modems have call-progress detection. It's an important feature for many communicators and the question of its presence should be verified before buying.

Some other features are adaptive line equalization and digital signal processing, which provide signal conditioning to compensate for line distortion. Not all modems have the features, but those that do seem to work better on telephone lines with marginal signal quality. Still, it is possible to get along without such features if telephone lines

maintain high signal quality.

While it should come as no surprise that stripped down, bargain-basement modems aren't necessarily the best devices for Compu-Serve users, it may be startling to find out that top-of-the-line units with all the bells and whistles may not be either. Although every prospective modem buyer has to consider the ways in which he or she will use a modem, many buyers can expect to find that medium-priced, multiple-speed, Hayescompatible modems without a lot of unnecessary frills are the best and most cost-effective choices.

Ernest E. Mau, CompuServe Magazine reviews editor, is a free-lance writer and editor who has been using microcomputers since 1978 and writing about them since 1980.

Some Practical Advice on Peripherals

The Practical Peripherals Forum (GO PPIFORUM), headed by Paul Hansen, is the gathering place for people with questions or advice on nearly any kind of computer peripheral, although modems dominate most forum conversations.

"Questions range from simple things such as how to change the speaker volume on a modem to questions requiring in-depth explanations on modulation techniques and data encoding schemes used in modems," says Hansen. Mark Young, a product betatester for Practical Peripherals Inc., assists Hansen in answering technical questions. However, topic discussions are not limited to PPI products, and other forum administrators and members often stop by to chat.

One such exchange concerning MNP (Microcom Network Protocol) modems spilled over into the TAPCIS Forum (GO



Sorts out modem mayhem: Hansen

TAPCIS) and back again. "Lots of good information about modems and serial communications appeared in that thread," says Hansen.

The purpose of the PPI Forum is to support PPI products, which currently include modems and printer buffers. "However," says Hansen, "I figure anyone who has a problem in telecommunications—regardless of who made the modem—is welcome in the PPI Forum."

Hansen is not employed by PPI (now a wholly-owned subsidiary of Hayes Microcomputer Products Inc.), although he occasionally does free-lance work for the company. He manages the forum independently.

Hansen's advice to forum newcomers (a lengthier version is printed on the PPI Forum's "Welcome" screen) is equally simple: Log on, get acquainted and post a message to "All." "Make every effort to help yourself before asking a question," says Hansen. "Read the documentation. Read the READ.ME file if there is one. Read the appropriate help files in Library 1."

Hansen also encourages forum members to remember that they are not alone. "Look around. You may find you are not the only person with your particular problem. You may find that someone already has put the answer on the message board."

Several library files will also help the PPI forum newcomer with modem-related queries. Hansen recommends files listed below.

Recommended Files from PPI

SAVMNY.HLP, Library 1. This helpful text file gives tips on using different baud rates to get the most for your online dollar.

COMDIG.ARC, Library 2. This arced program tests both serial and parallel ports on your computer. Hansen says this one is *not* for beginners.

BRKBOX.ARC, Library 2. A program (with documentation) that displays the status of RS232 signals. May be used with internal and external modems. Not for use with modem speeds above 1200 baud.

FAST.DOC, Library 1. Describes how to use ASCII 'scripts' to automate certain functions on CompuServe.

TMST42.ARC, Library 3. Arced program (with documentation), calls the Naval Observatory and synchronizes your computer clock with the Navy's atomic clock.

PNET01.TXT, Library 4. Text file describes Practical Peripheral's P/NET peripheral sharing program. P/NET enables disparate computers to share laser printers, etc.

LNOISE.TXT, Library 5. Describes common line noise problems and tests.

MNPCON.TXT, Library 5. A basic tutorial on the Microcom Networking Protocol (MNP).

STOCK OF THE WEEK

ONLINE BROKERAGE COMPETITIVE RATES

For A Free Brochure
On CompuServe
GO TKR

300 - 9600 Baud Modem (212) 809-1160

5PM to 9AM, Weekdays 24 Hours Weekends

Call Toll Free (800) 223-6642 (Voice)

In New York Call (212) 908-4550

Max Ule

26 Broadway Suite 200 NY, NY 10004

a division of Herzog, Heine, Geduld Inc. Members New York Stock Exchange Established 1926

GO OLI for more information.

Apple Forums Blossom Again

MAUG expands to 11 forums, adds message and library capacity.

With the aim of providing better service both to Macintosh and to Apple II/III users, CompuServe has expanded from seven to 11 the number of Apple and Macintosh forums operated by MAUG (Micronetworked Apple User Group).

Benefits include separate forums for Mac and Apple interests; improved message and library capacity; and greater availability of software for downloading to your machine. The result is that you can find what you're looking for in the forums faster and more efficiently than before.

"We had good MAUG forums before, but we wanted to provide better focus on the topics discussed," says Sharon Baker, Compu-Serve product manager. "CompuServe wants to remain the leader for Macintosh support among online services, and to do that we had to expand."

Also, the Apple II "is still viable and very prominent in the education market," she says. "We want to be the leader in providing online support for it."

So far, user feedback has been extremely positive, says Neil Shapiro, Apple and Macintosh forums administrator. "I think the reason is that we tried to bring users into the planning. We had a thread of more than 500 messages discussing the expansion. This is not a house that sysops built; it is a house that members and sysops built."

One immediate benefit was on forum message boards. Before expansion, the boards were so crowded that messages were "scrolling off" after a few days, leaving some members confused.

With expansion of the forums, information is easier to find because it's categorized better and messages stay up longer. The number of messages has increased by 25 percent on all forums operated by MAUG, Shapiro says. You also can expect to find more software in the forums because "as people use forums more, they'll tend to load more software into the libraries," he says. Thousands of free or low-cost software programs are available for downloading.

Along with expanding the Apple and Macintosh forums, Shapiro reorganized his team of forum administrators. They're headed by Shapiro (76703,401), chief forum administrator; Robert Wiggins (76703,3036), Macintosh executive sysop; Shawn Goodin (76703,1034), Apple II executive sysop; and Bill Cook (76703,1030), sysop librarian. The MAUG sysops try to answer calls for help within 24 hours.

Macintosh Community/New Users New Users Forum (GO MACNEW)

This one is actually for all MAUG members. Here new products are announced and Apple Corp. rumors are discussed. A "news from MAUG" section tells what's hot in other forums operated by MAUG.

It's also the place for new users. Plenty of help files are available to answer questions about how to use the message board and the libraries and to "talk to the sysop." Sysops watch this forum closely to make sure questions are answered.

Macintosh Productivity Forum (GO MACPRODUCT)

This forum is the place for sharing information about business productivity applications. Sections cover word processing, databases, spreadsheets and models, accounting and finance, desk accessories, system hardware, disks, even support for the Lisa and other early Macs. This forum replaces and expands on the Macintosh Business Forum.

Macintosh Art and Design Forum (GO MACDESIGN)

Here Mac graphic designers can find hundreds of design programs and tools to help in their work. Sections cover paint and draw programs, animation, multimedia, CAD, desktop publishing, fonts and typography.

Macintosh Entertainment Forum (GO MACFUN)

The Mac is a popular entertainer—whether you use it for games and puzzles or for live MIDI music performances. Sections here cover music, arcade and action games, adventure and role-playing games, board games, card games and educational games. You can even get help in designing your own games.

Macintosh Developers Forum (GO MACDEV)

Without programs to run it, the Mac would be like a TV set without channels. This forum hosts people with all sorts of programming interests—not only Mac developers, but also people who like to program in BASIC language, and others starting out as programmers.

Macintosh Hypertext Forum (GO MACHYPER)

"Hypertext" is a relatively new term describing computer databases that merge words, sound and pictures. HyperCard for the Macintosh was the first of these, and this forum is home to HyperCard enthusiasts, who have a language of their own.

Here you will find sections about "Hypertalk" and ideas for "stacks," "XCMDS" and other specialty topics.

Macintosh Communications Forum (GO MACCOM)

Everything you need to know about Macs communicating with other Macs and with other personal computers can be found in this forum. Also, there are sections and databases devoted to Compu-Serve Navigator, the program that saves Mac users time and dollars while online.

Apple Vendor Forums (GO APVENA, GO APVENB)

Many well-known vendors such as Claris, SuperMac Technology and others are here to meet their customers and answer their questions. On these forums, serving both Mac and Apple users, use the Names command to see which vendors are awaiting your questions.

Apple II/III Productivity Forum (GO APPRODUCT)

This forum is designed to increase the Apple user's business and personal productivity. You'll find expert advice on subjects from Appleworks to desktop publishing.

The forum has four sections devoted to Appleworks, one of the biggest integrated software products in the world. You'll also find sections on utilities, software, telecommunications, Apple hypertext applications and desktop publishing fonts.

Apple II/III Entertainment Forum (GO APPFUN)

This is the place to help your Apple entertain you and spark your creativity. You'll find sections on arcade, action and adventure games; education; sound effects; music and MIDI, arts and graphics; art hints and tips; HyperStudio; hot topics; a community square; and forum business.

Microsoft Connection Catches On

The 'Windows' company beefs up services to meet new demands.

If Microsoft Word "isn't talking" to your printer or if Windows has trouble running under OS/2, not to worry. The brains of Microsoft Corp. professionals are available online to move you from the problem to the solution.

"Users have an opportunity to communicate more directly with Microsoft through CompuServe, asking questions about our products and receiving technical support online," says Runnoe Connally, forum administrator for the Microsoft Connection, a family of Microsoft-related services on CompuServe. "The forums are also a place for users of our products to share information among themselves."

The Microsoft Connection, which began as forums supporting Microsoft applications (GO MSAPP) and systems (GO MSSYS), has expanded, mainly due to the volume of information being provided each month to CompuServe members.

New features include an extensive full-text searchable database, an ever-growing collection of software (see box) gathered in a single online area, and a forum for the direct exchange of information between users and third-party software developers for Microsoft Windows.

"Microsoft Corp. will administer the forum in the background while each manufacturer responds to its own customers," says Connally. "Until now, forum users had to help each other on non-Microsoft software questions or ask Microsoft Corp. for help, which was rather awkward."

Within the Microsoft Systems and Applications Forum, Connally urges customers to address technical queries directly to specific section leaders for a quick response. Section leaders are assigned to these seven product categories: DOS applications; Mac applications; Windows applications; Hardware; System Languages; Business Languages; and Operating Environments.

Patrick J. McKeand is a free-lance writer, desktop publisher and communications consultant based in Indianapolis. His CompuServe User ID number is 76004,3124.

New Features

The Microsoft Knowledge Base (GO MSKB): This database contains more than 14,000 items of information culled from customers' questions about products, plus helpful hints, common questions and answers, and "workarounds" for program bugs.

The Knowledge Base is updated daily by an administrative program that automatically adds new or updated items of information provided by Microsoft technical support engineers. This is the source even they consult when responding to support requests. Information covers all Microsoft products, including Microsoft Word, Excel, DOS, Windows and Works, and also includes systems and languages such as Quick C, C and FORTRAN. When the Knowledge Base refers to particular files, they are available in the Software Library.

The Microsoft Software Library (GO MSL): Virtually all files Microsoft Corp. makes available to the public are ready for downloading from the Software Library, a free-standing area within the Microsoft Connection. Files in the Software Library contain printer drivers for Microsoft Word 5.0 and source code for program listings in the Microsoft Systems Journal, a magazine for programmers using Microsoft language products.

The Windows Third Party A Forum (GO WINAPA): The Windows Third Party A Forum is designed as a vendor support forum for non-Microsoft products running under Microsoft Windows. Various third-party software developers provide their own technical support within assigned topic subsections.

Companies already supported in the Windows Third Party A Forum include Access Softek, Da Vinci Systems, Future Soft Engineering, GeoGraphix, hDC, HI-Q International, MCAE, Meta Software, Micrografx, Polaris, Precision Software, Publishing Technologies and Roykore Software.

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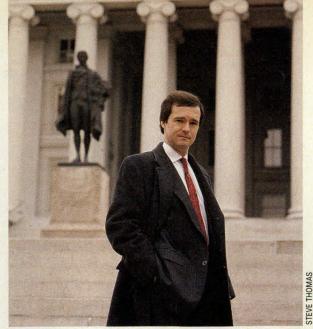
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NASDAQ doesn't just list start-ups: Spokesman Ferri

NASDAQ: Not Just Pitching Pennies

Often overlooked, the world's third largest stock exchange contains some hidden gems.

Here's a trivia question to toss out at the next party or gathering: Name the world's three largest stock markets. Most people will quickly cite the New York Stock Exchange (NYSE) as one (it's ranked second), and a few savvy, internationally minded folks will rec-

ognize that Tokyo is the largest. But chances are that few, if any, will guess that third in size is the automated quotation system operated by the National Association of Securities Dealers (NASD).

The NASDAQ, as the system is commonly called, is often misunderstood even among industry professionals. The misperceptions may be due to its mistaken association with unlisted and unquoted over-thecounter (OTC) securities such as penny stocks.

Adams Securities broker and Investors' Forum (GO INVFORUM) member Paul Tautvaisas focuses on the emerging growth companies that call the NASDAQ home. "These stocks offer greater long-term profit potential as they are yet to be discov-

ered by mainstream analysts," he says. "Thus, far-sighted investors who want to do their own research can perhaps get on the ground floor of tomorrow's IBMs, Xeroxes or General Motors."

As important as this sector of the market is, Bob Ferri, press spokesman for the NASD headquartered in Washington, D.C., stresses that it's a misconception to view NASDAQ as the home of only startup and emerging growth companies. "Many large, well-known corporations remain by choice with the NASDAQ rather than seeking a New York or American Exchange listing," he says.

"We were once considered a stepping stone for firms on their way to the NYSE or the AMEX. Today, if you examine our list of most actively traded issues, you will spot such familiar names as MCI Communications, Apple Computer, St. Paul Insurance and Laidlaw Transportation. Most people are shocked to learn that 31 of our companies are part of the widely followed Standard & Poor's 500 Index."

Unlike the NYSE where institutions dominate, 66 percent of the shares owned and 60 percent of the NASDAQ volume are attributable to individuals. "We are the market of choice for retail customers because they can trade among peers rather than attempting to outwit the Wall Street crowd," says Ferri.

Currently, NASDAQ accounts for 42 percent of all shares traded in the American financial markets. The 1988 and 1989 volume was in the 32 billion share range, 70 percent or so of that of the NYSE and 10 times that of the AMEX.

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This Exchange Makes
Dollars and Sense

The Poop on Penny Stocks, page 29 compete, is a model being copied worldwide." Ferri says. "When the London Exchange modernized a couple years back, they used us as their prototype. Similarly, Singapore has adopted our approach along with the Japanese OTC market."

Those seeking international investments will discover a large number of foreign issues trading NASDAQ in the form of American Depository Receipts. Prominent international firms such as Cadbury, Schweppes, Jaguar, Fuji, Cannon and Nissan all may be bought and sold as easily as any domestic American stock.

The other side of the NASDAQ market-

the "penny issues"—is Tautvaisas' area of specialization. "While I admit that many of the corporations in this portion of the OTC market have only a concept to pin their hopes on, I firmly believe prudent investigation can uncover some real future winners." (See accompanying story.)

Even prior to his days as a broker, Tautvaisas bought these kinds of issues for his personal account. "Many get burned speculating in these stocks because they become fascinated by a concept (i.e., a new computer advance or medical breakthrough), neglecting to investigate management and failing to reject those that cannot demonstrate a con-

tinual positive earnings record," he says. "Read the SEC filings excerpted online in Disclosure II (GO DISCLO) and screen the fundamentals using Company Screening (GO COSCREEN). Don't hesitate to call the companies directly to ask questions. If they're convinced you are a potential serious investor, they'll be more than happy to talk with you. Above all, diversify to avoid placing all of your eggs in a single basket."

One of the misconceptions concerning NASDAQ OTC issues is that there is a lack of readily accessible information. Data is as obtainable as for any exchange-traded firm. Historical prices are carried in the various

Becoming Penny Wise

"Cooling off" period useful: Astarita

An unknown broker tantalizes you with the prospect of a potentially lucrative investment in an emerging medical or computer industry firm. The concept is fascinating, despite the fact that the firm has never come close to earning a profit. Even more appealing is that the stock is selling for a nickel a share, enticing you with seemingly unlimited capital appreciation potential. Should you act upon impulse and invest?

This dilemma is common to those who are

solicited to purchase a special kind of OTC stock called a "penny issue." For the most part, penny issues are highly speculative ventures trading at \$1 a share or less. Quotes are nearly impossible to obtain, as these stocks are not tracked on services such as

CompuServe and can be found only on "pink sheets" circulated among brokers specializing in these securities. Similarly, news releases and financial data are difficult to obtain.

Not surprisingly, this limited information access encourages a wide spread between the stock's ask price (the price at which you purchase) and the bid price (that at which you sell). It also increases the possibility of price manipulation and that prospects receive less than the complete factual story.

While the Securities and Exchange Commission (SEC) does

a fairly good job of regulating the brokerage industry, these efforts have proven inadequate in controlling the abuses associated with penny issues. Thus in January the SEC instituted Rule 15c2-6, which forces broker dealers to make a documented suitability determination on a potential customer, and to obtain the customer's written agreement before a penny stock sale can take place.

This regulation applies to securities priced under \$5 a share, not listed on an

exchange or NASDAQ and issued by a company with less than \$2 million in tangible assets. One obvious limitation is that 15c2-6 is enforceable only if the buyer isn't an established customer of the prospecting broker.

"The rule requires a number of procedures for brokers making 'cold' calls," says New York securities attorney Mark Astarita. "Brokers are now required to obtain information regarding a customer's financial situation, investment objectives and experience. The customer is required to execute a written agreement prior to the transaction being finalized. So in effect, an initial purchase by a new customer will take three to five days to complete, giving the customer the benefit of a cooling off period."

Astarita acknowledges the dilemma faced by the SEC. On one hand, penny issues are a valuable—some would say indispensable—way for startup companies to raise capital. And many honest, reputable brokerage firms handle initial public offerings and aftermarket trading of penny stocks, he says. On the other hand, the area has been the subject of so much fraud and publicity that there is concern about abuses.

It is too early to judge the rule's impact, but Astarita speculates, "I don't think it's going to have much effect since it applies only to a customer's first trade with a broker. I do believe, however, that the real solution would be inclusion of all stocks in a widely reported pricing environment.

"'Let the buyer beware' is still the best policy," he says. "If you feel the urge to invest in a penny stock whose only asset is a concept, be sure that *everything* claimed is in writing. This is the only definite way to protect yourself."

-MP



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Often it is virtually impossible to distinguish a NASDAQ OTC stock from those trading on one of the exchanges. The one clue is that OTC issues carry four or more letters in their ticker symbols while exchange stocks

are three or less.

While you may not find news as predominantly displayed in the newspapers, OTC stocks are regularly covered by Reuter's Financial News Service and McGraw-Hill. When retrieving current day quotes, you will be notified of pending news developments by an asterisk (*) to the right of the time of the last updating. Get the details by typing /CONEWS at the QQUOTE Issue prompt or by keying the appropriate symbol after selecting Option 3, "Search by Ticker," from the top Executive News Service (GO ENS) menu. Option 3 on the Market Update menu, part of NewsGrid (GO NEWSGRID), furnishes

"These stocks offer greater long-term profit potential as they are yet to be discovered by mainstream analysts."

PAUL TAUTVAISAS

On NASDAQ growth companies



otherwise hard-to-find statistics (see box).

NASDAQ OTC stocks offer something for everyone from the speculative trader to the conservative investor, but are too often shunned or overlooked by many investors. With the aid of online information, they at least deserve consideration in the investment decision-making process.

Mike Pietruk is a forum administrator of CompuServe's Investors' Forum and an assistant vice president of Preferred Savings & Loan in Chicago. His CompuServe User ID number is 76703.4346.

NASDAQ Securities Info Online

If you're seeking information about NASDAQ and over-the-counter stocks try Comtex Scientific's Market Update (GO NEWSGRID, select Option 4).

Market Update has six OTC stock reports. One of these, a NASDAQ and closing indexes summary, spotlights harder-to-find indexes, including the industrial, finance, utility, bank, transport and the NASDAQ 100. (It also features the NASDAQ Composite, which is readily available from other sources, including Quick Quote, GO QQUOTE). Shown in a single table are current values contrasted with readings from one week and one year ago. Another chart reveals OTC market trends with advances, declines, volume and the Composite Index daily range.

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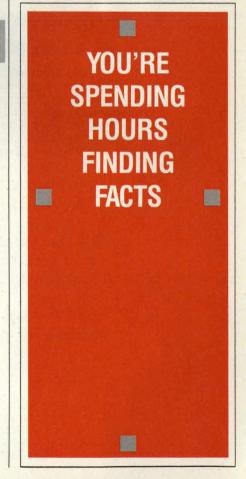
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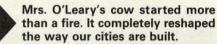
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Windy City Architecture: It'll Blow You Away



I wonder whether there's a word for architecture lovers—people who love to tramp through buildings to view their design details and learn something of the people who planned, built and used them. Perhaps "architrekkers" or "architrekkies."

Whatever the term, I'm one of them. And there are a lot of us around.

Recently I discovered that Chicago is one of the best places for architrekking. I also found out why the city is know as "the birthplace of modern architecture."

As London's architecture dates from the great fire of 1666, so Chicago's dates from 1871, when, supposedly, Mrs. O'Leary's cow kicked over a lantern in the barn. For the next four days, hundreds of new buildings burned to the ground.

When Chicagoans swept up the rubble, they also swept out the old way of building cities. Gone were one- and two-story wooden structures. In came fire-resistant concrete "skyscrapers" of seven stories and more. New ideas were flooding the city, which was still growing rapidly, and needed to be rebuilt quickly.

The Chicago Architecture Foundation sponsors more than 40 tours of the city and its suburbs through-

out the year, with enough variety for almost any taste. The Foundation was formed in 1966, when the owners of the John J. Glessner house decided to demolish it rather than pay taxes on the empty dwelling. It was the only surviving house designed by Henry Hobson Richardson, the preeminent American architect of the 19th century. A group of





Saved by the Foundation: Glessner House

architects and other interested people, headed by Phillip Johnson, a prominent American architect, formed the private, non-profit organization to save the house from the wrecking ball. Since then, the CAF has expanded its activities to operating two house museums (one of which is the Glessner House) in the Prairie Avenue Historic District; operating the ArchiCenter, an exhibition gallery, lecture center and store; and an educational pro-

TRAVEL

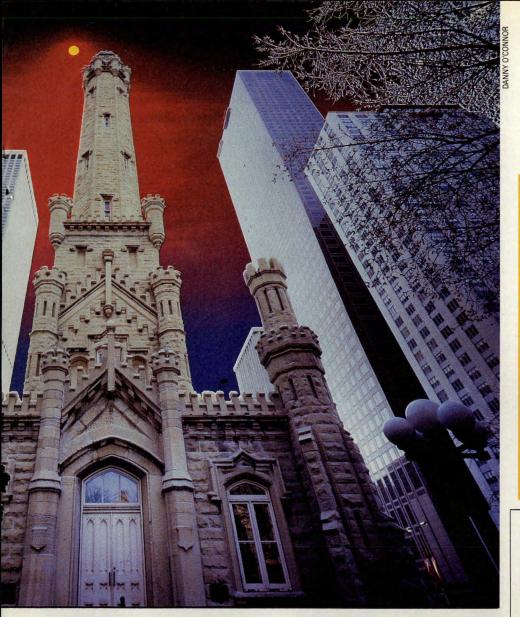
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Don't Get Looped on an Empty Stomach A Dining Guide: p.34

Fare Thee Well... And Book Too, p.37





Clean-lined creation: Federal Center

gram that includes the tours, which are conducted by a well-trained volunteer corps of 250 dedicated, enthusiastic docents.

I chose a balmy weekend in October to take the two "core" tours—Prairie Avenue and the Loop Architecture. These tours are offered regularly, whereas others, such as Hyde Park's Stained Glass or Jackson Boulevard Historic District, are given only once



Oak Park luminary: Frank Lloyd Wright's studio

or twice a year. The tours are easily accessible to visitors staying in a Loop-area hotel.

The Loop Architecture tour starts at the ArchiCenter at 333 S. Dearborn, one block west of State Street between Jackson and Van Buren. The walk begins at the Monadnock Building and goes to at least 27 other commercial buildings built between 1871 and the present.

'Architrekkers' Tour Information

Die-hard 'architrekkies' will be pleased to know that new tours are being planned all the time, according to CAF's Paul Glassman. To get current information, write or call the CAF (1800 S. Prairie Avenue, Chicago, IL; 312/326-1393) or dial 312/782-1776 for recorded tour information. Reservations are necessary for some tours, so it's best to plan ahead. For Chicago flight information, check the Official Airline Guide (GO OAG), Eaasy Sabre (GO SABRE) and Travelshopper (GO PARS), and breeze by the Travel Forum (GO TRAVEL) to catch discussions and tips on the Windy City.

New additions this year are likely to be a church tour and a tour of Chicago's movie theaters

Cost of the boat tour in 1989 was \$12; all other tours were between \$2 and \$6.

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Visitors can see the progression of building design on the Loop tour, from the 1872 McCarthy Building, the oldest building in the Loop (John M. Van Osdel, architect), to the still-under-construction Harold Washington Library (Hammond Bebby Babka). In between are the Monadnock Block—so called because the original building (1892) was added to three times between 1893 and 1983—which at 16 stories is Chicago's tallest wall-bearing structure; the art deco Chicago Board of Trade Building; the clean-lined Federal Center designed by Mies van der Rohe; and the Sears Tower, the world's tallest building.

We learned to recognize "Chicago windows," designed for ventilation and sunlight before the days of air conditioning and electric lighting. We understood Louis Sullivan's philosophy that "form follows function" by studying the Carson, Pirie, Scott & Co. Department Store, the world's first. Sullivan believed that such a store should be horizontal, not vertical, and that the windows should "frame" the goods for

sale inside to interest pedestrians outside. His design has been the standard for department stores ever since.

We saw a return to opulence and grandeur at 190 South LaSalle (Phillip Johnson, 1987), made possible by technology that slices marble thin and applies it quickly to walls as a veneer.

We learned that the Sears Tower sways as much as 27 feet on a windy day, and that plans are under way for a building taller than the Sears Tower and narrow at its base. And we were fascinated by the story of the Jewelers Building (not officially on the tour), which contained a car elevator at one time so jewelers, who presumably carried valuables on their persons at all times, could drive their cars into the building and park outside their offices.

So eager were we to ask questions and press for details that our Loop tour lasted three hours rather than the scheduled two. No one, including our guide, seemed to mind. There are so many buildings, so much information and so little time.

In contrast to the skyscrapers of the Loop, Prairie Avenue sits quietly and sedately in the past. Although it's only a few blocks from McCormack Place Convention Center, you'll be able to find a parking spot with no trouble, except on Sundays when the Bears are in town—it's also close to Soldier Field.

The Avenue was Chicago's original "Gold Coast," the fashionable street where the wealthy of the Windy City built showplace residences. Stately mansions of European design lined the street, built with traditional symmetrical floor plans. The Glessners were unusual people, and their house design showed it. When they built their elegant but unique home, it shocked their neighbors.

H. H. Richardson designed the house with a fortress-like granite exterior—squared off and close to the street, with no front porch and a few small windows. The interior, however, contains a sweeping, fluid floor plan that is inviting to visitors (the Glessners entertained often). The main rooms, lined with handsome woodwork throughout, face an inner courtyard. Windows are positioned

Out of the Loop: Chicago Sidelights

Following is a guide to a few unique Chicago eateries frequented by locals for quiet, remarkable meals, imported coffees and homemade desserts. Off the tourist track, they exude the true Chicago spirit.

Café Selmarie (2327 West Giddings; 312/ 989-5595) offers "coffees, sweets and savories." It is small (10 tables at most), delicate and located in the heart of a German neighborhood. (Nearby Meyer's Delicatessen bustles with customers stocking up on German chocolates, European coffees, sausages, cheeses and other delicacies.) Dinner treats at Café Selmarie include the onion tart plate, a brioche crust stuffed with a sour cream filling and topped with sautéed onion, red pepper and ham; and calzone, a crusty whole wheat turnover filled with mozzarella, Parmesan and fresh vegetables. Rum balls, pumpkin brandy cheesecake and a kahlua torte are some of the sumptuous homemade desserts displayed in the bakery case.

On the more exotic end of the scale, the Nightcrawlers Café (3912 North Clark; 312/871-4062) serves a cup o' worms. Gummi worms, of course. Located across from Graceland Cemetery, the resting place of famous Chicago entrepreneurs such as George Pullman, Marshall Field and Potter Palmer, the Nightcrawlers Café is connected to the Live Bait Theatre (3914 North Clark; for information on shows call 312/871-1212).



Famous for "cup o' worms": Nightcrawlers Café

Drawings by part-owner Sharon Evans decorate the walls, and each table and chair is a unique piece of artwork in and of itself. The dinner menu includes Theatrical Pasta, linguini tossed with ham, bacon, mushroom, onion and Parmesan cheese sauce; and Captain Jim's Gigantic Spud, a twice-baked potato stuffed with broccoli, cheddar cheese, red onion and tomato. For a glimpse of the Chicago literary scene, stop by at noon on Sundays for the High Noon Series, readings by locals of prose and poetry in the theatre.

Scenes (3168 North Clark; 312/525-1007), a coffeehouse and dramatist bookstore, is said to be a hangout for local actors, actresses and producers. Billie Holiday croons over the sound system while locals read books or immerse themselves in private conversations. Open seven days a week for breakfast, lunch, dinner and late-night snacks, Scenes has specialties on the simplistic but fine side. Try the warmed feta and oregano sandwich or rotollo served openfaced on sourdough. Muffins, humus served with pita bread, soups, salads and more are available along with special coffees and cold drinks spiked with torani, flavored Italian syrups

Further north, in the suburb of Evanston (just south of the Northwestern University campus) is Cross-Rhodes (913 1/2 Chicago Ave., Evanston; 312/475-4475), a Greek restaurant where you can savor souvlaki, mousaka, pastitsio and king-size gyros in a setting outside Chicago's more familiar Greek town. It's bright, open and friendly. The owner waves you into a comfortable seat, and you can stay for however long you want. The surrounding neighborhood is filled with boutiques, coffeehouses and oriental rug shops.

Pasteur (4759 North Sheridan Road; 312/271-6673), named after a street in Saigon, opened in October 1985 serving famous beef noodle soup (that which is served by the restaurants on Pasteur Street). Now offering a wide selection of spicey Vietnamese dishes, Pasteur is frequented for its chicken and ginger entree cooked in a clay pot (cooking time is 20 minutes) and a whole, deep-fried

to catch the sunlight in winter. Better-thanaverage servants' quarters and separate servants' hallways and stair ways—so servants'

traffic would not interrupt family and guests—attest to the Glessners' and Richardson's daring thinking.

The house is considered Richarson's finest urban residence. It is the only Richardson building still standing in Chicago and the only one open to the public in the United States. His works revolutionized American architecture and influenced other great American architects, such as John Root, Louis Sullivan and Frank Lloyd Wright. Even today, more than 100 years after its erection, the Glessner House is a big gulp of fresh air in the stuffy atmosphere of traditional house design.

A few yards from the Glessner House is

the Clarke House, the oldest surviving house in Chicago. It was built in 1836 a few blocks from where it now sits. It escaped the fire of

1871, and has been moved twice—30 blocks south in 1872, and back "home" to Prairie Avenue in 1977. The latter move involved lifting the house over the El tracks; it survived because of its sturdy post-

and-beam construction.

Henry and Caroline
Clarke designed and
built the home themselves. Because Henry
lost his fortune in the
Panic of 1836, the
Clarkes lived in the
house while they finished it, one room at a
time, between 1836 and
1860.

Because it was fin-

Guide to Chicago Festivals

For a change of pace between your architectural excursions, try one of Chicago's summer festivals that range from gourmet feasts to soul-filled blues. Following is the 1990 schedule. All events are held at Grant Park except the Air and Water Show and Sky Night/Venetian Night, which can be observed from the Lake Michigan shoreline. For details, call the Mayor's Office of Special Events (312/744-3315). For last-minute updates, call the Special Events Hotline (312/744-3370).

Chicago Gospel Festival Dates: June 2-3

Chicago Blues Festival Dates: June 8-10

Taste of Chicago (Chicago restaurants serving fine cuisine from a fairway of booths) Dates: June 27-July 4 Air and Water Show

(airplane and boat acrobatics)
Dates: July 21-22

Sky Night/Venetian Night: (light show and parade of boats) Dates: August 10-11

Chicago Jazz Festival Dates: August 31-Sept. 2

Viva Chicago (Hispanic festival) Dates: Sept. 8-9



Actors hang out here: Scenes

snapper topped with a coriander-garlic-fish sauce.

Near Wrigley Field, Pops for Champagne (2934 North Sheffield; 312/472-1000) entices festive spirits in a cozy, elegant environment immersed in live Chicago-style jazz (every night except Tuesday). Order by the glass from a list of 14 champagnes or by the bottle from "the most extensive champagne list in the country," according to owners Linda and Tom Verhey. Appetizers and desserts also are served, enough to make a light meal. Two gardens are open for seating in the summer. A jazz brunch is offered on Sundays.

To get the full gamut of Chicago's best restaurants, along with a fair idea of current theater, music and dance events, pick up *Chicago* magazine. It will tell you not only the telephone number and address, but also the kind of food served and credit cards accepted. *The Reader*, a free weekly newspa-

per, and *New City*, a free biweekly newspaper, also are valuable resources for unearthing goings-on about town. They are available at most newsstands, cafés and bookstores.

Travel by train is easy and convenient in Chicago. To find out what train will take you to your dining, or any other, destination, call RTA (Regional Transit Authority) information (312/836-7000) and be prepared to tell the operator where you are, where you want to go and what time you want to arrive. You'll be given all the necessary information.

As in any large metropolitan area, be sure to check into the safety of the areas to which you're traveling. Sometimes the best restaurants are located in the worst areas (in which case it's best to hail a cab). Take **La Choza**, for example. Located at 7630 North Paulina (312/761-8020), a notoriously bad neighborhood, La Choza has seen gang fights on its front step. Nevertheless, it is frequented by

wealthy North Shore residents and other Chicagoans for the best Mexican food around. Call ahead for winter/summer serving hours.

-Kassie Rose



ished over a number of decades, the house reflects changing tastes and technologies: Earlier rooms have fireplaces and large windows for lighting; later rooms have gas jets for heat and light and smaller windows.

The City Bureau of Architecture restored the Clarke House, and the Illinois chapter of the National Society of Colonial Dames furnished it as it might have been originally, with such authentic pieces as mail-order furniture on wheels (to move them easily to

the fire for warmth), bed warmers, cobweb catchers and other necessities of the time. Today the Architecture Foundation operates the house for the city as a museum.

While these core tours should be on anyone's agenda, the CAF has any number of



Architect's haven: Inside Wright's studio

specialty tours available. Besides those already mentioned, there are tours of Graceland Cemetery, with monuments designed by noted architects and sculptors; Highland Park and Lincoln Park (separate tours by bicycle); Marshall Field's; and Old Town Triangle, among others.

In cooperation with the Frank Lloyd Wright Home and Studio Foundation, the CAF offers tours of Oak Park, which boasts the largest concentration of Frank Lloyd Wright designs in the world. The CAF and Chicago from the Lake

Ltd. jointly sponsor a boat tour of the Chicago River, on which tourists glide beneath the river's 52 moveable bridges—more than in any other city—and glimpse some of the city's most breathtaking buildings up close.

If you don't already consider yourself an

"architrekker," a tour of the "birthplace of modern architecture" may turn you into one.

Jenine Howard is a free-lance writer based in Bloomington, Ind. Her CompuServe User ID number is 76004,1761.

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A special Macintosh addition coming in May's magazine.

We brought you the award-winning CompuServe Navigator, have the world's largest Macintosh support group and the best and biggest online community around. Now here's some of what's coming in May:

Favorite Mac files.

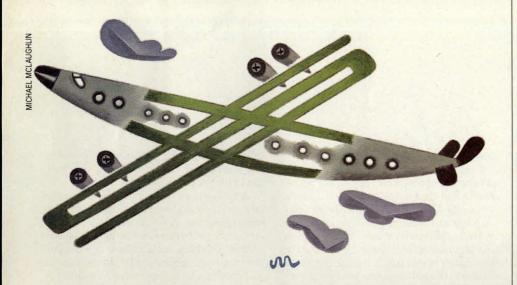
Quick reference tables.

Mac forums milestones

CompuServe Information Manager for the Mac.

To receive this special issue, stop by and join the Macintosh Community and New Users' Forum (GO MACNEW) before April 1. Active members of Macintosh-related forums are already on our list.

by Jenine Howard



Get Your Fair Fare

Airline deregulation created a mess and some good bargains, too.

Call an airline ticket agent to book a flight and you may find that if you secure a fare on the third Wednesday of the fourth month during daylight hours (and only before dinner, please), you'll be granted the lowest fare possible. Then you call the next day and find an even cheaper fare available. And woe to those who have locked in a fare with a credit card and want to make a change. Take that you busy traveler!

Airline deregulation, which took place more than 10 years ago, changed the financial face of airline travel by bringing a whirlwind of changes to air fares. The effects are still felt today. The "fare process" sometimes appears chaotic to a person attempting to get a definitive price on a flight, but it also has created previously unavailable bargains for travelers.

Before deregulation, air fares were regulated by the Federal Aviation Administration. All airlines on any given route carried the same fare structure, and there were only a few fare classes to choose from—first, business and coach.

Today there are still the three basic classes of fares, but within those classes, there are literally dozens of fares—maybe as many as 100—you might pay on a given route. Not only that, but the fares can change from week to week and even day to day. According to Jane Copper, director of Electronic Sales at the Official Airline Guide, there are an average of 40,000 fare changes a day. "There may be different fares at noon than there were at 11 o'clock," she says.

The reason for the differences is that airlines price tickets according to how they can best sell all the seats on a plane. A certain number of travelers, for instance,

Booking a Flight Online

Once you've decided on a flight, you can make your reservation online. This does not mean you can't change your mind. You won't incur penalties until you pay for the ticket. So you'll want to keep checking the latest fare schedules up until you purchase your ticket. Easy Sabre and the Official Airline Guide update their fare changes daily. Travelshopper updates several times a day.

When your plans are final, you can decide whether to purchase your ticket online and have it mailed to you, or direct your reservation to a travel agent who will ticket it for you. You also can enter your Frequent Traveler numbers when you make reservations, and you can check the status of your Frequent Traveler bonus miles within the services—American Advantage in Eaasy Sabre, TWA and Northwest in Travelshopper, and all airlines in the OAG.

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make their plans weeks, even months, ahead of time. They pay for the ticket well in advance and are not likely to change plans. For these people, airlines offer a discount for early payment. But that discount carries a heavy penalty—sometimes as much as 100 percent of ticket price—for canceling the ticket or changing plans.

There are also discounts for people willing to leave and return at non-peak travel times, or who are willing to make stopovers and connections that help the airline fill seats on unpopular routes or travel times. Again, restrictions apply to the fare, such as purchasing the ticket in advance and paying a penalty for changing plans.

Ticket prices rise as the travel time gets nearer, and as the traveler's time flexibility decreases. If you need to fly today, for instance, in peak business hours, you most likely will pay the highest fare on that flight in your class (coach, business or first).

An airline starts with a certain number of fares at each level on each flight, but as the flight date and time near and seats are left unsold, the airline adjusts fares, often offering bargains previously unavailable. This practice creates what *The New York Times* referred to as "gone today, here tomorrow" bargains. So it pays, when making travel plans, to recheck a flight that you had eliminated earlier. There may now be a good deal

A good travel agent will recheck fares and available flights for you several times before you ticket your flight. But a travel agent cannot read your mind. You might be willing to change the day of your flight, for instance, or make a connection to save money.

Fortunately, CompuServe members can use the online reservation services to look for fare bargains. You can access these services with the GO TRAVEL command or by using their individual commands—Eaasy Sabre, American Airlines reservation system (GO SABRE); Travelshopper, owned by PARS, which is jointly owned by TWA and Northwest Airlines (GO PARS); and the Official Airline Guide (GO OAG).

These services—the same ones used by travel agents—provide what PARS information provider Larry Curcuru calls "dynamic availability"—the system gives you the best available fare for the flight time you request. Although each has its own format, they are simple to use so you can successfully com-

plete a reservation on the first try.

Further, Eassy Sabre's Bargain Finder and Travelshopper's Low Fare Finder let you reserve the flights you want and use the systems to find the lowest fare. From there, you can book the flight or look for more fares.

This is particularly useful when dealing with combinable fares. Sometimes round-trip fares do not match the criteria of the chosen itinerary. In that case, the reservation systems will combine fares to make one fare that is not published on the fare screen. This often is the case when the fare quoted by the travel

on a Saturday. (The Saturday of Memorial Day weekend is not available on this fare, due to the Indianapolis 500.)

A \$208 fare on the same route carries the same restrictions except for the 30-day advance purchase. A \$432 fare on the route carries no restrictions except for the 30-day advance purchase requirement. A \$512 fare carries no restrictions at all. Moreover, fares will continue to change until this flight is sold or until it leaves the ground.

Keep in mind that airlines overbook due to "no shows." This is the reason for so many

Cracking the 'RPFJCSYN' Code

Most airline reservation systems classify service by code. Following is a definition of those codes that appear on airline tickets:

R = supersonic (available on Concord aircraft flights)

P = premium first class (most often on flights to the Orient)

F = first class

J = premium business class (often on flights to the Orient)

C, D = business or ambassador class

S = standard class (most often on flights between European cities)

Y = coach (may be discounted on international flights)

B, H, Q, M, T = discounted coach class

K, L, V = discounted thrift class

U = shuttle service (no reservations are made)

N = indicates a night flight and may follow any of these codes, such as YN.

agent does not match the fares online.

For more information on Low Fare Finder and Bargain Finder, GO PARS and GO SA-BRE, respectively.

Each airline reservation service will ask for your departure city, destination city, date and time of travel, and booking code. Because the fares are tied to these codes, it helps to know them. They are F, P, and J for first class; C and D for business or ambassador class; and Y, M, B, Q, V, L, H, T, and K for coach (see box on this page). Remember, each code carries specific rules.

If you're looking for the best fare and you can be flexible in your travel plans, you'll want to remember the thrift class code. For instance, a round-trip K fare from Indianapolis to New York's LaGuardia airport can be purchased for \$148 (price quoted at press time). It must be bought 30 days in advance and paid for within 24 hours after making the reservation. It carries a 100 percent cancellation penalty. Moreover, travel must be

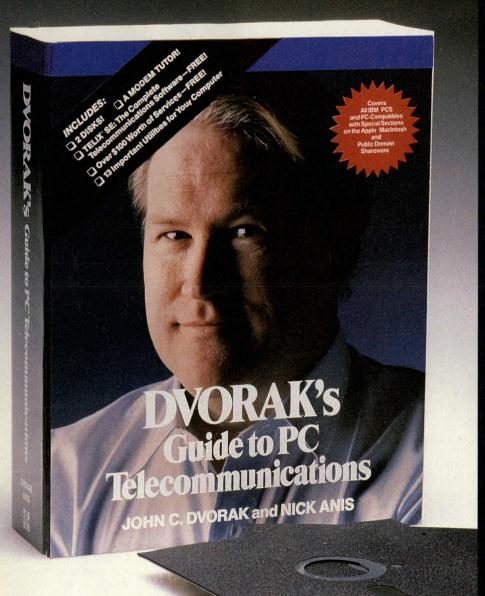
advance-purchase discounts and their stiff penalties. If the flight is overbooked and there are not enough "no shows," however, you may be upgraded from coach to business or first class—if there are seats available in those classes—or given a free flight voucher for agreeing to take a later flight.

Searching online for the best fares can be fun—sort of like playing a video game with the airlines. (Imagine *Pac-Man* chomping up those high-priced fares!) And you can be assured of finding the best bargains with Travelshopper's Low Fare Finder and Eaasy Sabre's Bargain Finder.

Selecting the "fares" option of any of the three online reservation services will give you a feel for these different fares. Typically, it takes only a few minutes, and you get the same information as your travel agent.

Jenine Howard is a free-lance writer based in Bloomington, Ind. Her CompuServe User ID number is 76004,761.

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New Age Guide to Periodicals

Why dig through musty stacks of magazines and newspapers when it's all in your computer?

Telebase employee Marian Quinn recently relocated to Philadelphia, went house hunting, and found the "perfect home." But, before signing contracts, she searched IQuest's VU/TEXT database of full-text newspaper articles for historical information

from The Philadelphia Inquirer.

To her horror, Quinn discovered that homes in the area were built on a landfill and were literally being sucked into the ground. News reports from 1983 warned her that many of the homes had cracked foundations. With just a bit of online periodical research, she spared herself from more than one kind of sinking feeling.

Thousands of newspapers, magazines and newsletters are churning out trillions of words. Cutting through that thicket of information to find what you need-whether it's a story on the incredible sinking neighborhood or a layman's report on a medical breakthrough-gets tougher every year.

Online databases offer you access to information without having to find the publications in a library or sub-

scribe to them and store them in your home. The format, sophisticated search mechanisms, and breadth and depth of information combine to offer users today's most efficient research method.

Starting with the Abstract

There are several features that make online periodical research efficient. Among these is the abstract, a summary of an article's salient points. Serving as a researchfiltering mechanism, it is useful because it quickly shows if the full-text is beneficial. In some cases, the abstract is so complete that it meets the need. Abstracts also help to quickly separate publications that hit the target from those that miss it.

Article summaries are so valuable to researchers that IQuest offers a number of abstract-only databases, including the Federal Register Abstracts, Sociological Abstracts and PTS Annual Reports Abstracts. Using these, especially in conjunction with full-text databases, saves a lot of time.

For example, a chemical engineer who must stay abreast of the Environmental Protection Agency regulations on the dumping of hazardous waste can exploit abstracts. By conducting a highly targeted search of IQuest's Federal Register Abstracts, she is able to check in minutes whether new regulations have been issued. Abstracts in this database include a brief description of the notice, the source, page number and date, allowing the engineer to quickly tell from just these few lines if the EPA has issued a new regulation of which she needs to be aware. By carefully selecting keywords, she will be sure no important information is missed. For regulations that directly apply to her clients, she can retrieve the full-text from the Federal Register, also in IQuest.

Other CompuServe databases, such as Computer Database Plus, offer both the abstracts of the articles and the full text-all in one place. Health Database Plus offers abstracts of articles from professional medical journals as well as full-text articles from the popular press.

Two types of abstracts are offered for many medical journal articles. One is the author's abstract, usually written in scientific language by a physician for other medical professionals. Another abstract is written for the lay reader, where the complex medical jargon is rewritten in plain English. This allows, for example, a father who wants a better understanding of his child's illness to read the latest information from The New England Journal of Medicine. In such a case, the abstract offers access to material that might otherwise be too complex for the lay-

Ordering from the Menu

In addition to the abstract, a carefully crafted menu is another online tool that speeds a search. Researchers find that welldesigned menus allow them to zigzag through massive amounts of information, targeting facts they want. Complex, lengthy

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> Save a Tree and Save Some Time

Human Sexuality Database Revamped, Expanded, page 42

articles can be divided into manageable segments that make the research process more productive.

You can rely on the menu to guide you through the research maze, narrowing and broadening a search as needed. Two databases that do this particularly well are Computer Database Plus and Health Database Plus (see box on this page).

For example, if you want recent articles on WordPerfect's compatibility with various peripherals and add-ons, a search of Computer Database Plus would tell you what thumbing through dozens of computer magazines probably wouldn't. Searching under the Product Name menu category, the system automatically presents a series of menus that further define the search, pruning more than 450 articles on WordPerfect to eight articles that offer just the information needed. In less than a minute, the system locates full-text articles about merge-

printing envelopes with HP LaserJet printers and WordPerfect, the use of WordPerfect as a hypertext micro application, and WordPerfect and fax computer boards.

Through search mechanisms that work well, online databases offer users access to the world's information—access that would not otherwise be readily available.

Cathryn Conroy is a contributing editor of CompuServe Magazine. Her CompuServe User ID number is 70007,417.

Start Your Search Here

IQuest (GO IQUEST)

No matter how good your local library is, chances are it doesn't rival the scope of information available in an electronic database. IQuest contains more than 850 databases, many of which offer the full-text of magazines and newspapers ranging from *Business Week* to *Women's Wear Daily*. This breadth and depth of information means that searches on the microcosm or the macrocosm are equally successful.

Developed by Telebase Inc., the individual full-text and abstract databases are made available through such online services as Dialog Information Services Inc., BRS Information Technologies, NewsNet and VU/TEXT Information Services Inc., among others. IQuest executes the search and displays the results for you.

In addition to regular CompuServe connect-time fees, each IQuest search costs \$9 (some databases also may carry an additional surcharge of \$4 to \$25). Each group of 10 titles in a bibliographic database, or 15 titles in a full-text database, is regarded as a search. A request for an additional set of titles is charged as a second search. Complete pricing information is available online.

Computer Database Plus (GO COMPDB)

A comprehensive collection of computer-related article summaries and full-text stories from leading computer publications, Computer Database Plus offers micro to mainframe coverage of hardware, software, electronics, engineering, communications and the application of technology.

Developed by Information Access Co., it features more than 61,000 full-text articles from more than 126,000 references. Such magazines as *PC Week, PC Magazine, PC/Computing, Byte, Communications of the ACM, Computer World* and *MacUser* are among the more than 130 titles offered. Updates are made weekly, and most publications date back to Jan. 1, 1987. Every article contains either a summary abstract or full-text; many have both. There are nine search methods, which can be used alone or in combination.

Computer Database Plus carries a surcharge of \$24 an hour (or 40 cents a minute) as well as \$2.50 for each complete record (abstract and full-text; \$1.50 if only the full-text is available) and \$1 for an abstract only.

Consumer Reports (GO CONSUMER)

Long known and respected for its expert testing and evaluation of various consumer products from automobiles to VCRs, Consumers Union offers an electronic edition of its monthly print magazine, Consumer Reports.

Selected product and service reports on a variety of topics can be accessed online. New articles are added monthly. Articles are arranged alphabetically in menus within specific categories: appliances, electronics/camera and home. The date of publication is shown on the menu and with each article. The reports are divided into four sections: Introduction/ Overview, What to Look For, Recommendations and Models Tested/ Ratings.

Automobile information is organized as a searchable database by features, such as model year, make/manufacturer, size/type, reliability, city gas mileage and more. More than 30 makes from Acura to Yugo are included. Consumer Reports carries a surcharge of \$1 for each article.

Health Database Plus (GO HLTDB)

With both consumer and professional publications in the areas of health, nutrition and fitness, Health Database Plus is one of the most comprehensive and current health information sources. Developed by Information Access Co., it is composed of three types of publications:

Core journals, such as *Food & Nutrition* and *Psychology Today*, are publications with health, medical and nutrition information oriented to the lay reader. Most are in full-text with coverage from January 1989.

Technical and professional journals include such titles as *The New England Journal of Medicine* and *Patient Care*. Although the full-text is not presented, both an author's abstract and an abstract designed for the lay reader are offered. Coverage begins in June 1989.

Health-related articles are from 1,000 consumer publications, such as *Parents* and *Modern Maturity*. Coverage begins in 1983, and articles generally include the full-text.

Six search methods, used singly or in combination, are available.

Health Database Plus carries a surcharge of \$15 an hour (25 cents per minute) plus \$1.50 for each full-text article. If only abstracts are available, the charge is reduced to \$1.

Sexuality Database Revitalized

Streamlined 'HSX' easier to use and more fascinating than ever.

Six years after launching the display area that eventually evolved into the Human Sexuality Medical Information and Advisory Service (GO HSX), Howard and Martha Lewis say they're seldom shocked but are continually amazed by the complicated lives people lead.

Growth of HSX has been phenomenal-500-plus questions are fielded weekly over the electronic hotline-prompting a sweeping redesign of the area. The database, once confusing and time-consuming because of its depth and scope, now is easy to maneuver, while the content remains rich in information on relationships, anatomy, fertility, marriage, contraception, adolescence and social success.

"The database has been organized by departments so a user can quickly find an area of interest and tap into dozens of related articles, interviews, reader exchanges, questions from other users, and answers supplied by Howard and Martha's team of experts," explains CompuServe Product Manager Patricia Phelps.

'Our original model was a magazine with questions, answers, special features, letters to the editor and so on," says Martha. "But over the years, we've found that an even greater need is to provide a database to candidly answer people's questions. So many messages begin, 'I'm glad you're here because there's no one I can ask this question.'

"We either research the questions using

current medical literature or send them to consultants for responses," says Howard. "We call on psychiatrists, psychologists, urologists, gynecologists, sex and family therapists and others. The information and advice they provide are substantive and include suggestions for further help.'

Turnaround is rapid, and answers are in easy-to-understand terms. The Lewises, veteran journalists with 11 health books to their credit, describe themselves as medical writers who specialize in interpreting scientific data for the layperson. They are editors of the Medical Aspects of Human Sexuality, The Journal of Sex Education and Therapy, Sex and Disability and RN Magazine. Together they have written The Parent's Guide to Teenage Sex and Pregnancy, The People's Medical Manual, Sex Education Begins at Home, Psychosomatics: How Your Emotions Can Damage Your Health and other books.

"This is an electronic magazine and meeting ground," says Howard. "We bring to the public the findings of sexual medicine experts. We provide a direct link over the computer with the foremost authorities, acting as a conduit for people who want to learn and take part."

Besides the sweeping database changes, the two associated forums also have been revamped. Now forum visitors can select between the open forum (GO HSX-100), targeted to a general audience, and the adult forum (GO HSX-200), appropriate for members at least 18 years old. Those who access the closed adult forum must send a message to "sysop" stating that they are at least 18 years old and that they have read and agree to the online agreement. Conversely, any member can send a message to "sysop" requesting that his or her account never be allowed access to the closed adult forum, thus providing control over an account used by

The forum areas support more than two dozen self-help and discussion groups. Each section has at least one leader who acts as conference facilitator, managing editor and discussion panelist. Although many participants have advanced degrees in counseling and therapy, they are not acting in a professional capacity online. The Lewises emphasize that group activity is a gathering of peers and not a substitute for psychotherapy.

"A lot of people seek encouragement and companionship," Howard explains. "Here they find 'rooms' of people who are on their wavelength."

Doctors who have been forum conference guests are amazed at the level of communication that takes place. Issues that would be comfortably discussed face-to-face only after several trust-building sessions often surface immediately online.

"When people are involved in an intense conversation over the computer, there is less shallow and superficial conversation," says Martha. "People feel safe. They're home; they can disconnect at any time, yet they know they're tuned into someone who can help them."

Every effort is made to preserve the integrity of the environment and to protect users from topics they may not wish to explore. This is true both in the database and in the forums. Information is organized in such a way that users easily can explore subjects of interest without ever being exposed to "sensitive" material. Some of the data are repeated under more than one general category. The Birth Control Guide, for example, is filed under Family Planning, Mainly for Men and The Women's Center.

As large as HSX is, a friendly, nonjudgmental tone permeates it. It cuts through the high technology of the medium

> and encourages candor, honesty and the exchange of accurate data. The Lewises work to maintain a balance between personal communication and professional information.

> "People tell us that the typing becomes invisible and the conversation becomes instinctive," says Howard. "This linking of minds leads to relationships that are real and wonderful. A lot of growth occurs, and in some cases, the communication is practice for offline behavior."

Holly G. Miller is a free-lance writer and college professor from Anderson, Ind. Her most recent book is How To Earn More Than Pennies For Your Thoughts: A Writer's Guidebook.

The New HSX Main Menu

Option 2 on the main menu, "Find Areas That Interest You," is the gateway to the 10 revised general categories:

- 1. Happier Couples ** Social Success
 2. Family Planning ** Parenting
- 3. Health and Disease
- 4. For Sexual Pleasure
- 5. Mainly for Men
- 6. The Women's Center
- 7. Especially for Teens
- 8. Gay/Lesbian/Bisexual Concerns
- 9. Midlife and Beyond
- 10. Alternatives ** Dealing with Offenses

The submenus under the 10 general categories include a "hotline" choice where users can add comments or ask questions. For example, the Family Planning and Parenting menu offers these options:

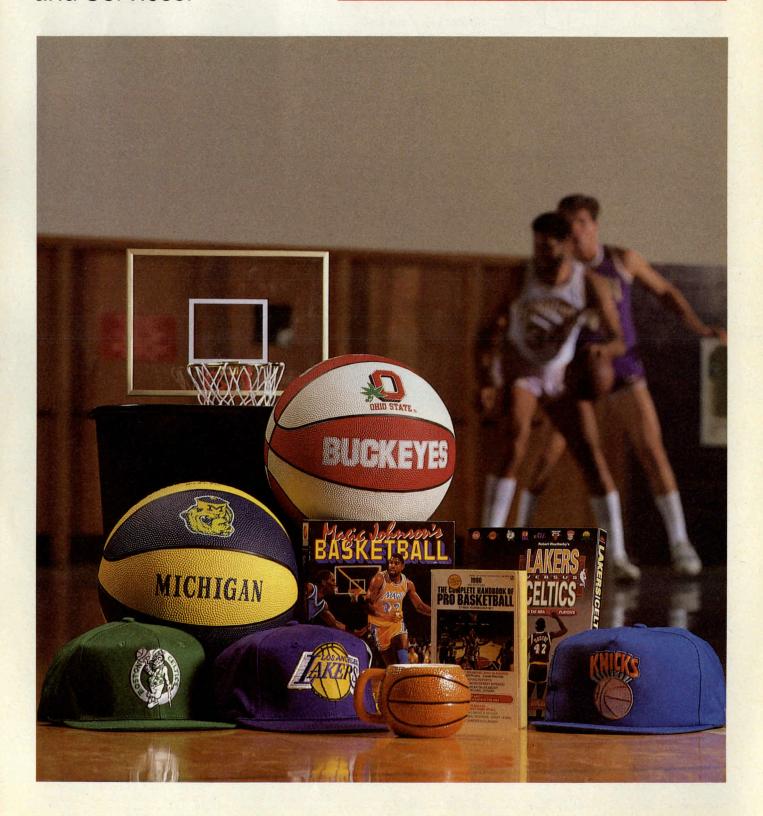
- 1. What's New
- 2. Birth Control
- 3. Pregnancy and Childbirth
- 4. Fertility and Infertility
- 5. Abortion Considerations
- 6. Bringing Up Children
- 7. "Talk About Relationships"
- 8. Hotline: Your Comments and Questions

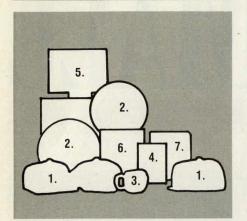
Further submenus narrow the focus of the topic. For example, if you select Option 4, "Fertility and Infertility," you will see:

- 1. Causes of Infertility
- 2. Help for Achieving Pregnancy
- 3. Adoption
- 4. Hotline: Your Comments and Questions

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From Coffee, Anyone ??? GO COF

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From Penguin Books. GO PB

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Take time out of your workday with style. Clear plastic backboard with gold-colored rim and mini net attaches to your wastebasket. \$15. From Sharon Luggage and Gifts. GO SL

6. Magic Johnson's Fastbreak Basketball.

Bring arcade action home with this translation of the popular coin-operated game, *Magic Johnson's Fastbreak Basketball*. Features arcade-quality animated graphics, full-court scrolling screen with two-on-two play and much more. Includes a poster of Magic. For the IBM (\$27.99) and the Amiga (\$34.99). From Computer Express. GO CE

7 1 1 0 - 14:--

7. Lakers vs. Celtics.

The NBA's best go head to head in a great on-court shootout! For the IBM. \$32.

From Software Discounters of America. GO SDA

Go Mall, published monthly in CompuServe Magazine, is a shoppers guide for the Electronic Mall, a service of CompuServe Incorporated. For more information call 614/457-8600. Editors: Cindy Morgan, Kirk Donnan, Denise Erwin-Anderson and Pam Busch. Art Director: Thom Misiak. Design: Dorothy Hogan.

Go Mall gets a new look.

Beginning with this issue, *Go Mall* will appear in every issue of *CompuServe Magazine*. We have redesigned *Go Mall*, too. Inside, you will find prices on nearly every item pictured, more detailed product descriptions, an expanded Mall directory featuring credit card and shipping information, and a handy six-week calendar of Mall events. We welcome your comments on our new look. Send CompuServe Mail to the editors at 70007,1525.

"Get To Know The Mall" with free connect time.

During March and April, a different segment of The Mall will be spotlighted every week for eight consecutive weeks. Visit on Saturday or Sunday and the connect time is free at the merchants highlighted! "Get To Know The Mall" kicks off with "The Computer Connection," offering free connect at 23 merchants, which carry computer-related products and services, on March 10 and 11. For a complete schedule, see Goings-On at a Glance on page 58.



Free connect time, catalogs and software at Buick Magazine.

Visit Buick Magazine and view the new 1990 line-up at your leisure. The connect time is free at Buick seven days a week, 52 weeks a year. Request free catalogs, brochures and software, too. Now you can download the new 1990 Buick Dimension software (IBM or Macintosh) online, or you can request a free copy to be mailed to you. GO BU

CDA Computer Sales' 10th anniversary celebration.

CDA Computer Sales kicks off its 10th anniversary celebration with four weekends of free connect time in March. Shop for free on March 10, 11, 17, 18, 24, 25, 31 and April 1. CDA picks up the connect-time tab. During March and April, all shoppers who place an order of more than \$100 also will receive a CDA Celebration coffee mug. All have a chance to win in CDA's Celebration Giveaway. First prize is a prepaid trip to Vail, Colo., for a week of skiing, hiking, rafting or golf. Two second-place winners will receive a Macintosh Plus computer; three third-place winners will reap a \$500 CDA gift certificate. No purchase necessary. For complete rules and regulations, GO CDA.

Shop for CompuServe merchandise in every issue of Go Mall.

Each spring, you will receive an issue of *Go Mall* partially dedicated to CompuServe merchandise. For 1990, *this* is the issue. Turn to page 53 for a collection of products from CompuServe. In the remaining 11 issues of *Go Mall* each year, you will find at least one CompuServe product featured. It's just another way of staying in touch with you offline. To access the CompuServe Store, GO ORDER.

A.B. Austad's fore golfing goods.

When Oscar Austad, a self-proclaimed lousy golfer, sold his first golf tube 27 years ago, he never dreamed he would someday be a leader in the golf equipment business. But today Austad's, a South Dakota-based company with customers in all 50 states and more than 50 foreign countries, is the acknowledged leader in the industry. Now, with the opening of its Mall store, the Austad "family" has grown again.

Austad's has everything a golfer needs to get from tee-off on the first green to the 19th hole. Clubs (B) from leading manufacturers, such as Spalding, Dunlop and Yamaha, as well as several of Austad's exclusive lines, including AccuTech and Titan. Shoes from Nike, Foot-Joy and Austad's own Nubbies. Golf wear, including the Sycamore Hills line of men's and women's clothing. Personalized tees and balls. Golf bags, headcovers and pull-carts (A). Indoor putting greens, driving nets and *Pro Golf II*, a hand-held game for when the weather does not cooperate. Also featured are whimsical offerings, such as Austad's *Fairway Fanatics Trivia* game and handsome gifts for golfers, especially Austad's personalized 24-karat, gold-plated putter with leather grip. All items carry a one-year free trial, a one-year warranty and Austad's complete-satisfaction guarantee. Many are Austad's exclusives—items made expressly to meet Austad's standards and specifications.

Also, take part in Austad's "Go Fore the Green" grand-opening giveaway. Request a free catalog for your chance to win one of many prizes. Shop March 17 or 18 when connect time is free and receive a free gift with every purchase of \$25 or more. Members who place orders this weekend—for either catalogs or merchandise—will be eligible for the grand-prize drawing. You will find complete rules and regulations online.)

Before teeing off, GO AU.

Austad's grand-opening, free-connect weekend: March 17 and 18.

C. Subscribe to USA Today, online.

Only *USA Today* gives you a national perspective on the news that affects you in four colorful, information-packed sections every day, Monday through Friday. Readers get the latest on news, money, sports and life. From stock trades and baseball cards, to money trends and fashion trends, *USA Today* covers it all in full color. State-by-state weather forecasts. Nationwide classified ads. Book, movie and music reviews. It's all in *USA Today*.

Read all about it online at *USA Today's* Mall newsstand. Preview the list of upcoming bonus sections, too, including supplements on the NCAA Basketball Tournament, 1990 Spring Training and summer travel. Subscribe online for home or office delivery and save up to \$32.50 a year. Choose a one-year, six-month or three-month trial subscription. For news to go, GO UT. USA Today's *grand-opening*, *free-connect weekend: March 10 and 11*.

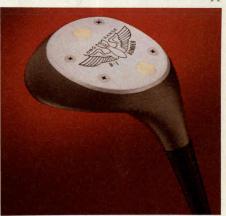
Get auto insurance quotes online from CIGNA.

Innovation and new products have been the CIGNA Companies' hallmark for nearly 200 years. Now CIGNA heads toward the 21st century with the online introduction of AutoSafe, a personal auto insurance program for CompuServe members. Through CIGNA's new Mall branch, request a free custom quote for auto insurance conveniently and confidentially from the comfort of your home—seven days a week, 24 hours a day. The no-obligation quote will be sent via CompuServe Mail in about 48 hours. All who respond to this promotion, qualify for a free one-year membership in the CIGNA Road and Travel Club.

AutoSafe offers three essential coverages that meet all states' requirements: liability, medical payments and uninsured/underinsured motorist coverage. Policyholders also can add any number of optional coverages to their policies, including collision coverage, comprehensive coverage and rental reimbursement. The AutoSafe plan is priced competitively and backed by a 24-hour claims service via CIGNA's nationwide network of claims offices.

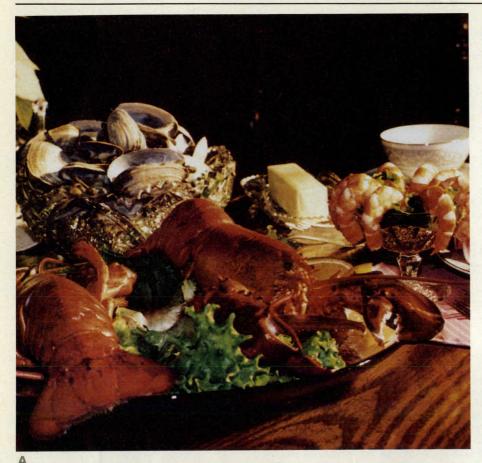
For a custom quote and expert answers to your questions about auto insurance, GO CI. CIGNA's grand-opening, free-connect weekends: March 17 and 18, March 24 and 25.

















A. Lobster Express brings a taste of New England home.

Imagine live lobsters delivered to your door. Lobster Express, a New England-based directmarketing company, offers a taste-tempting selection of distinctive seafood gift packages for everything from a romantic dinner for two to a fabulous feast for 20. Each lobster gift pack comes with complete cooking instructions, recipes and the necessary accessories, such as shell crackers, picks and bibs. New England clams round out the meal. All you supply is the pot and the appetite! Fresh shellfish gift packs of sea scallops, shrimp and clams also are available. Shipped by UPS Next Day Air in a reusable styrofoam container, all orders are guaranteed to arrive fresh or your money back!

Lobster Express also offers an array of cooking accessories and gift items, including a 19-quart lobster pot, a gourmet shellfish cookbook, a lobster claw hot mit and a lobster towel.

For a taste of New England, GO LOB. Lobster Express' grand-opening, freeconnect weekend: March 17 and 18.

B.C.D. The Museum of Fine Arts, Boston, spotlights Monet.

The Museum of Fine Arts, Boston, is proud to open its doors online. Step inside its Mall gift shop and explore an exquisite selection of reproductions and adaptations from the Museum's collection. Jewelry and scarves. Stationery and desk accessories. Items especially for kids, cat lovers and art aficionados. Among the Museum favorites are the fruit basket scarf (B), the Museum kite (based on an ancient Japanese silk kimono from the Museum's textile collection) and the whimsical dancing pigs pin. Spotlighted now are items celebrating the Museum's Monet exhibition, a major retrospective that opened in February and runs through April 29. Select the Monet exhibition catalog, Monet notecards (C) or a Monet kaleidoscope (D). an eye-opener for all ages.

Shop online or request a free copy of the Museum's full-color catalog. All items in the catalog can be ordered electronically. Members also are invited to request a membership application online.

To visit the Museum's new Mall shop, GO FA.

The Museum of Fine Art, Boston's, grandopening, free-connect weekend: March 3 and 4.

Type 99 after any Mall merchant's GO command (i.e., GO CE99), and zip right to a list of that merchant's products featured in *Go Mall*.

HOT TICKETS

New for the nineties.

A. Weekenders' automatic pet feeder.

Recommended by veterinarians, this is the only feeder that automatically provides premeasured quantities of pet food at regular feeding times for an entire weekend. Includes a blue-ice pack that fits under bowls to keep food fresh.

From Hammacher Schlemmer. GO HS \$39.95.

B. Electronic printing calculator by Canon.

Briefcase, hand-held size. Runs on AC adaptor (included) or built-in rechargeable NiCad batteries. Features automatic constant, repeat calculations, memory and mixed calculations, percentage add/on discount, decimal selector item count and round-off switch. Weighs only 13.4 ounces.

From The Stationery Center. GO SC \$89.95.

C. Sharp's compact fax.

Sharp combines state-of-the-art functions with ultra-compact style for the answer to your business communication needs. The UX-180 fax machine can send a standard letter-size document in as little as 18 seconds. Sends photos and illustrations in 16 shades, too. Warranteed.

From Spiegel. GO SGL \$1,099.

DOLLARS OFF

Super savings and sales.

D. Healthometer "Big Foot" scale.

Professional scale of heavy gauge steel with large 7-inch speedometer dial.

From Push Pedal Pull Fitness. GO PPP List: \$99.

On Sale: \$79.95.

E. Hoyle's Book of Games.

Match wits with your favorite Sierra character for humorous, yet cut-throat, games of gin rummy, crazy 8's, hearts, Klondike solitaire, old maid and cribbage.

From Software Discounters of America. GO SDA List: \$34.95.

On Sale: \$23.

F. The Toshiba CD-ROM drive.

For Macintosh or IBM compatible. Model 3201. With the fastest access times available, these drives provide high-fidelity audio output for use in applications when text and audio are combined on the CD-ROM disk. Price includes installation kit.

From The CD-ROM Store. GO RS List: \$1,180.

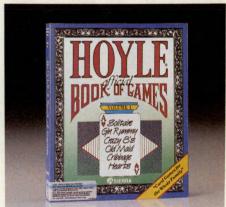
On Sale: \$829.











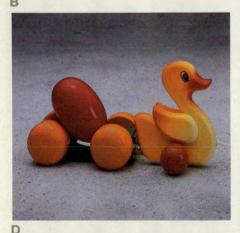


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F

SEASONAL PICKS

Celebrating St. Patrick's Day and Easter.

Irish cream coffee.

The luck of the Irish, in regular or decaffeinated. Colombian coffee with Irish cream flavoring. All of the taste with none of the calories. \$7.50 a pound. Other flavored coffees available, too, including pina colada, chocolate mint, Grand Marnier and Hawaiian hazelnut.

From Coffee, Anyone ??? GO COF

A. Irish invasion.

Spotlighted this month, Irish groups and performers, including U2, The Chieftains, Van Morrison, Enya, The Waterboys, Sinead O'Connor and Hot House Flowers. CDs and cassettes.

From AM/PM Music & Video. GO AM

The World of Peter Rabbit.

Beatrix Potter's world brought to life. Featured items include *The Original Peter Rabbit Miniature Collection* (\$4.95), *The World of Peter Rabbit Sticker Book* (\$5.95) and *The World of Peter Rabbit Postcard Book* (\$6.95). Also, available for adults: *Beatrix Potter's Art* (\$24.95), *The Journal of Beatrix Potter* (\$29.95) and *Beatrix Potter's Letters* (\$29.95). From Penguin Books. GO PB

B.C. Easter eggs and bunnies.

An array of Easter offerings, including Button-Eyed Bunnies cookie tin, egg-shaped fudge in three flavors, egg-shaped Easter tin filled with pastel "bunny corn" and a glass egg filled with jelly beans.

From Pepperidge Farm. GO PF

D. Kouvalias duck with rolling egg.

Beautiful and brightly colored, finished with a high-gloss lacquer, the perfect Easter gift for ages 1 to 3.

From Hobby Center Toys. GO HC \$29.95.

E. Brambles Plush Bunny and Fluffy Sunshine Chick by Gund.

Extremely huggable, these soft, colorful animals from Gund round out any Easter basket. Brambles stands 12 inches from tail to the top of his ears and Fluffy measures 9 inches from head to toe.

From Walter Knoll Florist. GO WK Brambles \$29.95. Fluffy \$12.50.

F. Tropical Easter basket.

An attractive woven basket that arrives brimming with incredibly sweet giant ruby grape-fruit and juicy valencia oranges. Complimentary Easter gift wrap. Deluxe one-half bushel assortment. Shipping included.

From Florida Fruit Shippers. GO FFS \$40.95.

A.B. The New Ford Simulator II.

The 1990 Ford Simulator II is better than ever. Three driving simulations test your driving skills. The New Vehicle Showroom puts vital information on the new 1990 models at your fingertips, including manufacturer's suggested retail prices, standard equipment and options, and monthly payment schedule. Available in 5.2-inch, 5-inch or 3.5-inch diskettes for IBM and Macintosh users. Requires 512K. Priced to move quickly.

From Ford Motor Co. GO FMC \$6.95.

Slash your phone bill. Phone toll-free instead.

You don't have to pay for long-distance calls with AT&T's Online Toll-Free 800 Directory. Best of all, AT&T picks up the connect-time tab while you use the directory. Search by category or company name. Thousands of companies put their products, services and catalogs at your fingertips, toll-free. It's fast, fun and free.

From AT&T 800 Directory. GO ATT

C.D. Monte Carlo Magnifique.

Air France Jet Vacations thinks you deserve a week of R&R at the fabulous Loew's Hotel, the largest resort complex on the Riviera. Tour prices include round-trip economy air fare between any Air France US gateway city and Nice, France; double-occupancy hotel accommodations at the renowned Loew's Hotel for six nights; a free rent-a-car for the week; a free massage; sightseeing; and more. Depart from one of eight major cities. Hurry! Prices valid through March only. From Air France. GO AF \$899 to \$1,059.

E. Free French wine brochure.

Published by Food and Wines from France, a colorful 20-page guide to the art of serving and enjoying French wines. Features wines from all regions, including Cotes Du Rhone, Beaujolais and Bordeaux.

From France Info. GO FI

F. The OAG Travel Planner Hotel and Motel Redbook.

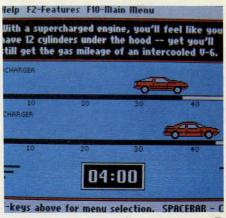
Europe bound? Off to the Far East? Headed to Harrisburg or Hilton Head? Consult the OAG Travel Planners for a room with a view. Three editions—North America, Europe and Pacific Asia—are available. Each includes a hotel/motel reservation directory, maps and more, and is published quarterly.

From Official Airline Guide. GO OA Subscription price: \$97 each, plus \$9 second-class delivery.

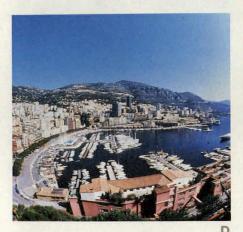
Request free brochures at Nissan.

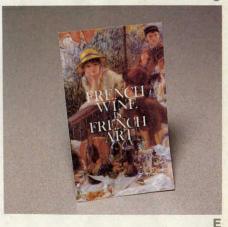
Nissan Motor Corp. USA invites CompuServe members to check out the new 1990 Nissan cars, trucks and vans online. From the 300ZX world-class sports car to the GXE van, Nissan automobiles are built for the human race. Order any of Nissan's full-color brochures. Or consult the dealer locator for the Nissan dealer nearest you and take a test drive.

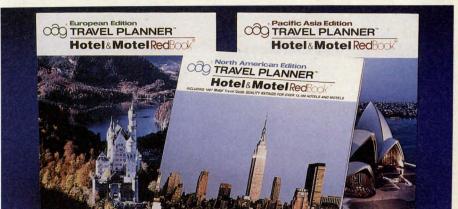






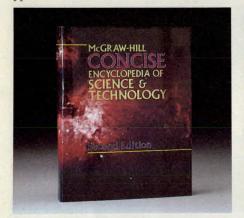


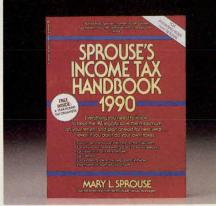


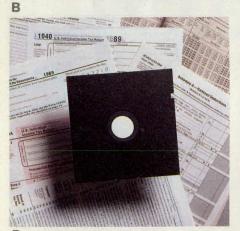


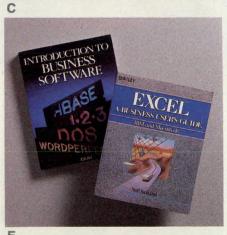
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A. Software for many happy returns.

Twenty hot tax programs and books, all at 25 percent off. Selected by Waldenbook's tax experts, the programs include Turbo Tax from Chipsoft, Quicken from Intuit and Andrew Tobias Tax Cut from Meca Ventures Inc.

From Walden Computer Books. GO WB

B. The McGraw-Hill Concise Encyclopedia of Science & Technology, second edition.

Complete, concise and convenient. The definitive scientific desk reference for professionals, students and science buffs. This one-volume reference is the work of more than 3,000 of the world's finest minds—19 Nobel Prize winners among them.

From McGraw-Hill Book Co. GO MH \$110.

C. Sprouse's Income Tax Handbook 1990. Beat the IRS legally, save the maximum on your return and plan ahead for next year—even if you don't do your own taxes. Includes free year-round tax organizer.

From Penguin Books. GO PB

D. Free tax disk from *Business Week*. Subscribe to the standard or international edition of *Business Week* online and get a free copy of The Tax E\$timator with a paid

free copy of The Tax E\$timator with a paid subscription. This fast, friendly, self-instructional program for IBM PCs and compatibles allows continuous "what if" tax calculations for the current tax year.

From Business Week. GO BW Free.

\$10.95.

E. The best in business software books. The best in new and backlist business soft-

ware books, including:

Excel: A Business User's Guide by Neil Salkind (\$21.95), a book designed to bring business professionals quickly and easily up to speed with Excel on both the IBM and the Macintosh.

Introduction to Business Software by Que Corp. (\$14.95), a book that introduces new computer users to the basics of Lotus 1-2-3, DOS, dBase and WordPerfect.

From Walden Computer Books. GO WB

F. Printer ribbons, from Apple to Zenith. Printer ribbons—at very competitive prices—for virtually every type of printer, including

Apple, Commodore, Epson, Okidata, Star and Tandy/Radio Shack. Laser-printer toner cartridges, too.

From Direct Micro. GO DM

The Professional Photography Collection from DiscImagery.

A very affordable collection of 100 professionalquality photographs for desktop publishing, design and presentation projects. Includes unlimited reproduction rights. Compatible with all popular CD-ROM drives, Macintosh or IBM, and any program that accepts TIFF files. From The CD-ROM Store. GO RS

\$149.

A. Rent a tree.

A tree grows in Texas (pecan), New Hampshire (apple), the shores of Lake Ontario (cherry), the heart of the South (peach) and it has your name on it. Rent Mother Nature introduces four new unique, delicious and naturally wholesome gift ideas—tree leases.

- Pecan tree lease and gift basket (\$75.95), harvested in November.
- Apple tree lease and gift basket (\$69.95), harvested in October.
- Sweet cherry tree lease and gift basket (\$62.95), harvested in mid July.
- Peach tree lease and gift basket (\$75.95), harvested in late May or early June, depending on Mother Nature.

Leases and gift baskets also available separately. All prices include shipping.

From Rent Mother Nature. GO RM

B. Gift avalanche from Alaska.

More than two dozen gifts "Made in Alaska," including an Eskimo yo-yo, a Ulu knife, a pink rhodonite heart and a scrimshaw kit. Also, videotapes featuring Alaska, Glacier Bay and the Denali Wilderness.

From Alaska's Ivory Cache. GO IV

C. Compact disk clock.

This starkly designed clock uses one AA battery and measures 4.5 inches by 5.5 inches.

From Sharon Luggage and Gifts. GO SL \$20.

D. Exotic dendrobium orchid plant.

Grown specially in Hawaii and shipped by Federal Express at the beginning of its annual blooming cycle, this beautiful and exotic orchid makes a memorable gift. Allow two business days for delivery. Includes Federal Express delivery.

From The Flower Stop. GO FS \$44.95.

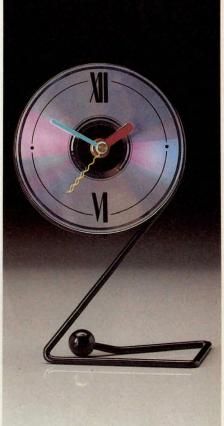
E. The Chocolate Gallery's first-aid kit.

The perfect gift for hypochondriacs, doctors, nurses and chocoholics. A first-aid kit made completely of chocolate! Chocolate aspirin, chocolate diet pills, chocolate bandages and more.

From Some Things Special's Unique Boutique. GO SP \$23.95.





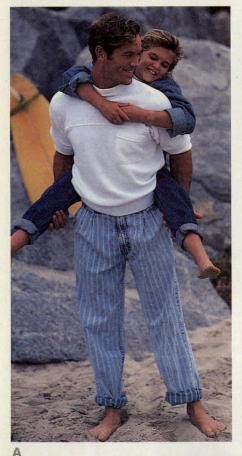


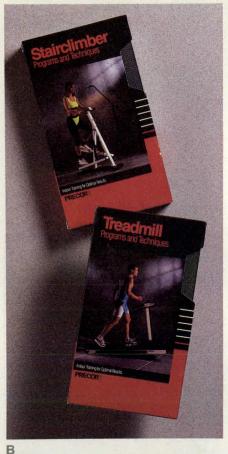


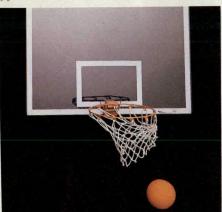


Type 99 after any Mall merchant's GO command (i.e., GO CE99), and zip right to a list of that merchant's products featured in Go Mall.

51













A. Levis for him and her.

For him, select from Levi's trousers, jeans or famous 506s. For her, the famous five-pocket jeans in misses, juniors and women's sizes. Most available in acid wash or stonewash. blue or black.

From Spiegel. GO SGL

B. Precor videos.

Precor Stairclimber Programs and Techniques Video and Precor Treadmill Programs and Technique Video. How-to and training strategies to help you get optimum results from your workout.

From Push Pedal Pull Fitness. GO PPP \$14.99 each.

C. Slam-Dunkers' indoor basketball set.

Using a patented recoiling action, this miniature basketball set's steel rim instantly returns to its original position even after the hardest slam dunks. (Backboard: 24-inch by 18-inch) From Hammacher Schlemmer. GO HS \$44.95.

D. Fifty plus hair products.

More than 50 kinds of shampoo, conditioners and thinning treatments, including products from Pantene, Jhirmack, Vidal Sassoon, Progaine and Neutrogena. Beauty, eye, dental and personal-care products also featured. Stock up, and spend \$50 or more and the freight is free!

From The Court Pharmacy. GO RX

E. The Las Vegas casino slot machine.

This authentic slot machine brings the excitement and exhilaration of a Las Vegas casino into your home. Microprocessor controlled, it tracks combinations diagonally and straight across, giving you five ways to win on a single spin. Any combination releases your winnings. May be played with or without

From Hammacher Schlemmer. GO HS \$369. Postpaid.

Fox micro radar detector.

Keep your speeding tickets and insurance payments in check! Great for city and highway driving. Includes shipping. From Miltrobe Electronics. GO MI \$174.90.

F. Griffo grill.

Unique new rack for better, easier grilling. Multihold grill rack supports delicate seafood, vegetables, poultry, meats, even pizza, and keeps them out of the fire. Fits all conventional gas and charcoal grills.

From The Chef's Catalog. GO CC \$34.99.

Type 99 after any Mall merchant's GO command (i.e., GO CE99), and zip right to a list of that merchant's products featured in Go Mall.

Order from CompuServe.

Shop CompuServe's Spring Sale from March 1 through April 30 and save on CompuServe merchandise on pages 53 through 55. Users guides and software will help you get the most out of CompuServe online, while Compu-Serve apparel will keep you covered offline. You'll find ordering instructions on page 55.

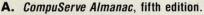
CompuServe Users Guide, May 1988, edition.

The definitive guide to the CompuServe Information Service. This fully indexed 200-page guide covers dozens of products including, CompuServe Mail, forums and the CB Simulator. Comes with a system configuration diagram and quick reference booklet. Get the guide and a \$10 usage credit for \$9.95. That's like getting the guide for free.

Includes a \$10 usage credit. List \$14.95.

Save \$5.

\$9.95.



Your offline guide to CompuServe's online services. Browse descriptions of more than 400 services arranged in easy-to-follow categorized listings. Quick reference words and surcharge information accompany each description.

List \$12.95. \$7.95.

Save \$5.

B. CompuServe Financial Services Users Guide, July 1988, edition.

Find how you can get current and historical quotes, identify investment candidates and copy financial information to your computer in a format that you and your software can use. A sound investment for new and experienced members.

List \$13.95. \$10.95.

Save \$3.

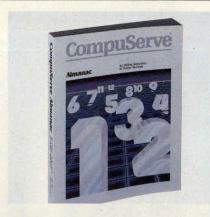
C. The CompuServe Membership Kit.

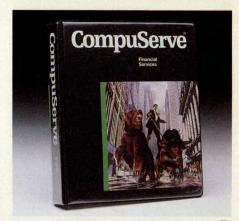
For the friend, family member or business associate who wants to get online with Compu-Serve, this kit comes with a personal User ID number, password and a list of access numbers. It also includes the CompuServe Users Guide, a quick reference booklet, a system configuration diagram and a free subscription to CompuServe Magazine.

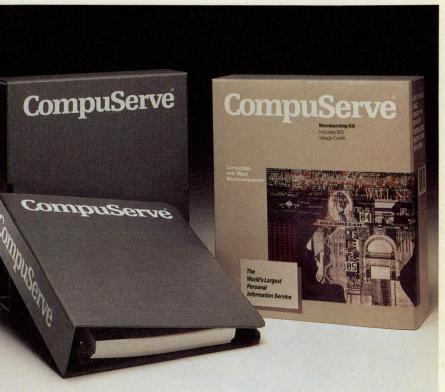
Includes a \$25 introductory usage credit. \$39.95.

IQuest Database Directory, April 1987, edition.

A categorized list of the more than 850 databases available through IQuest. Arranged by subject, this easy-to-use directory enables you to find the names and descriptions of databases related to particular subjects. An invaluable reference tool for IQuest users. \$3.95.



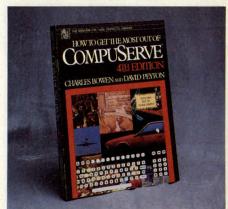




D. How to Get the Most Out of CompuServe, fourth edition.

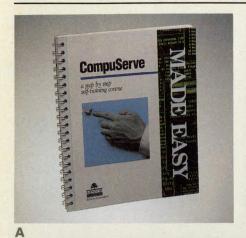
Explore the CompuServe community with this fun and informative book. Now in its fourth edition, this book's conversational tour of CompuServe's leading products continues to be favorite reading for members new to CompuServe.

Includes a \$12.50 usage credit coupon. List \$20.95. Save \$3. \$17.95.



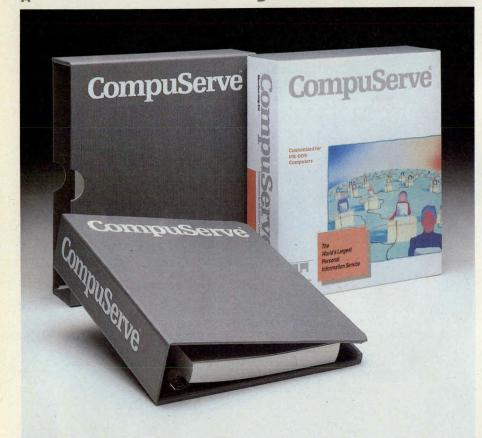
D

C





R



Self-study courses.

Learn to use CompuServe services offline with Mentor Technologies' self-study courses. You will quickly pick up the skills and shortcuts enjoyed by expert members. Mentor's courses are geared to the way you think and work. Clear interactive examples, step-by-step instruction and usage tips make Mentor's courses a class offering.

A. CompuServe Made Easy.

New and novice members will find this an instructional overview of CompuServe. Learn the benefits of a service and the fastest way to use it in sections that include:

- · Navigation and screen controls.
- CompuServe Mail.
- · Forums.
- Executive News Service.
- · Financial services.
- Research services.
- Travel.

Includes a \$20 usage credit coupon. \$39.95.

B. Forums Made Easy.

In-depth instruction on the skills you need to get the most out of CompuServe's forums. Turn to this guide to master skills that include:

- · Finding and reading forum messages.
- Transferring files.
- Composing messages, offline and online.
- Participation in conferences.

Includes a \$12.50 usage credit coupon. **\$24.95**.

Online Research Made Easy.

Get the information you need from Compu-Serve's news and reference services using the techniques in this guide. Learn how to:

- Tap IQuest's more than 850 databases for business, government, research and news information.
- Start an electronic 'clipping folder' using CompuServe's Executive News Service.
- Get information about companies, including their performances and projections.
- · Use powerful up-to-date demographics.
- Access PaperChase and Health Database Plus for medical information.

Includes a \$15 usage credit coupon. **\$29.95.**

C



Software.

Custom CompuServe software is unparalleled when it comes to getting the most out of every minute you spend online. All packages listed are fully supported by CompuServe.

C. CompuServe Information Manager, MS_DOS version.

A more intuitive way to use the CompuServe Information Service. A windowed interface, pull-down menus and dialog boxes make it easy to find and use information effectively. Take the Information Manager offline and there's more. Retrieve and store messages on your computer for offline review. Use a full-screen text editor to compose several messages offline and upload them at once. Includes a \$15 usage credit.

COA OF

D. VIDTEX for Atari and Commodore .

Get communications software that supports:

- · Low- and medium-resolution graphics.
- Automatic log-on and menu navigation files.
- Error-free file transfers on CompuServe.
 List \$39.95.
 \$19.95.

VIDTEX also is available for Apple II computers, the TRS-80 Model III and Color Computer. \$39.95.

A. CompuServe wristwatch.

Swiss movement and quartz drive, each watch is guaranteed accurate within two minutes a year. Plus a genuine-grain ebony leather strap. Available in men's or women's styles.

List \$29.95. \$25. Save \$4.95.

CompuServe gift certificates.

Give the gift of CompuServe anytime—\$25 gift certificates can be applied to future online usage charges. Shipping and handling included.

\$25.

\$2.50.

CompuServe system configuration wall chart, May 1988.

Navigate the Information Service easily with this 33-inch by 34-inch poster. Features the top menu and all main sub-menus.

List \$3.95.

Save \$1.45.

Higher Intelligence poster.

This detailed rendering of the "higher intelligence" image, produced exclusively for CompuServe, will enhance any office or den. Poster is 18¹/2-inch by 24-inch. Limited supply. **\$1**.

B. Passing Gear T-shirt.

Take advantage of a special sale price of only \$5 while supplies last. Extra large only. List \$7.95. Save \$2.95. \$5.

C. CompuServe T-shirt.

Cotton/polyester T-shirt silk-screened with the CompuServe logo. Available in light blue, navy blue and red. Adult sizes small, medium, large and extra large.

\$7.95.

D. CB T-shirt.

Available in navy blue, light blue and red (adult sizes small and extra large) and navy blue and red (adult sizes medium and large). Limited quantities available.

\$7.95.

E. Free with \$35 order of CompuServe merchandise. Network Nation poster.

A stylish rendering of the Information Age. Poster measures 23¹/2-inch by 29³/4-inch.

F. Free with \$50 order of CompuServe merchandise. CompuServe digital desk clock.

A contemporary timepiece, mounted within a clear lucite desk stand for high visibility. Comes with a perpetual calendar.











F

ORDERING INFORMATION FOR COMPUSERVE MERCHANDISE ON PAGES 53-55

To order, type **GO ORDER** at any Information Service prompt. This command also allows you to view descriptions and prices for CompuServe merchandise. This area is free of connect-time charges. Non-members may order by calling **800/848-8199**. Weekdays 8 a.m. to 10 p.m. ET. Saturdays noon to 5 p.m. ET. Based on the total price of merchandise, postage and handling is calculated according to the following scale and added to the total price.

International shipments:

added to the total price.		International s
Amount	Postage/handling	Amount
⁵ 0 to \$.99.	\$.50.	^{\$} 0 to ^{\$} 19.99.
§1 to \$14.99.	\$2.50.	\$20 to \$49.99.
15 to \$49.99.	\$3.	\$50 and up.
50 and up.	\$4.	

All orders are subject to applicable state sales taxes. Canadian orders must add $^{\$}2.50$ to all orders more than $^{\$}1$.

Postage/handling

\$25.

The Electronic Mall Directory is designed to assist you with information about each of our merchants. All entries contain 3 lines as follows:

Merchant Name [GO Code]

Description of Products/Services Billing Options Countries Served

An example entry would look like this:

ABC NOVELTY STORE [ABC]

Books, knick-knacks, collectibles VI/MC/AM/CSH US/CD/JP/OT

You may visit the ABC NOVELTY STORE by using the quick reference word (GO ABC) at any Information Service! prompt.

The billing options codes indicate the methods of payment the merchant accepts as follows:

VI - VISA

MC - MasterCard

AM - American Express

DI - Diners Club

DIS - Discover Card

SC - Merchant's Own Store Card COD - COD

CSH - Cash, check, money order DB - Direct Bill

NA - No Billing Applies (Advertiser only)

The country codes indicate the countries the merchant is able to ship to as follows:

US - United States

JP - Japan CD - Canada

OT - Other Foreign Countries

The options for merchants offering catalogs are indicated by the following codes.

Offers free print catalog.

Denotes electronic order form for use with print catalog.

 Credits cost of print catalog toward purchase.

† Denotes new merchant.

A>HELP STORE [AH]
PC's, software, help accessories
VI/MC US/CD/JP/OT

AIR FRANCE [AF] Info on tours, sights & scenes VI/MC US/CD

ALAMO RENT A CAR [AL]
Info on rates, benefits, locations NA LIS/OT

ALASKA'S IVORY CACHE [IV] ** Alaskan jewelry, ivory, gold, gifts VI/MC/AM/DIS US/CD/JP/OT

AM/PM MUSIC & VIDEO [AM] CDs, cassettes, videos VI/MC US/CD

AMERICAN TRAINING
INTERNATIONAL [ATI] **
Computer training software programs
VI/MC US/CD/JP/OT

ARTWEAR/OUTWEST [AO] **
Hand-designed shirts & jewelry
VI/MC/AM US/CD/JP/OT

AT&T HOME-OFFICE RESOURCES ONLINE [ATT] † Technology that brings success home NEW! Go ATT for details

AT&T TOLLFREE 800 DIRECTORY [ATT] †
FREE Thousands of tollfree numbers

AUSTAD'S GOLF SHOP [AU] †
Golfing accessories, apparel & gifts
NEW! Go AU for details

AUTOQUOT-R [AQ] Vehicle price quotation service VI/MC/AM US

AUTOVISION [AV] Automobile leasing & buying service NA US/CD

PC books, utilities, software VI/MC US/CD

BUICK MAGAZINE [BU] FREE Car information, customer svc. VI/MC US/CD

BUSINESS INCORPORATING GUIDE [INC] Nationwide incorporating service

BUSINESS WEEK [BW]
Subscription packages & information
VI/MC/AM/DB US/CD/JP/OT

CD CLUB [CD] *
Compact Disk ordering club DB US

CD-ROM STORE, THE [RS] CD-ROM drives & accessories VI/MC US/CD/JP/OT

CDA COMPUTER SALES
[CDA] **

Hardware, printers & accessories VI/MC/AM/DIS/CSH US/CD/JP/OT

CHECKFREE CORPORATION [CF]
Electronic banking & bill payment svc. VI/MC/AM US

CHEF'S CATALOG, THE [CC] **
Gourmet cookware & kitchen VI/MC/AM/DIS US

CHEVROLET SHOWROOM, THE New, used & classic cars, racing info VI/MC US

CIGNA [CI] †
Free personalized auto insurance NA US

CLASSICAL MUSIC CLUB MEMBERSHIP [CM] Classical music ordering club DB US

COFFEE, ANYONE ???™ [COF] Original Computer Coffeehouse,

gifts VI/MC US/CD/JP/OT COMPUSERVE STORE [ORDER]
Merchandise, literature & software

COMPUTER EXPRESS [CE] * • PC software, hardware, accessories VI/MC US/CD/JP/OT

COMPUTER MART, THE [PD]
IBM compatible PCs, peripherals VI/MC US

COMPUTER SHOPPER [CS] Computer product bargains & info mag VI/MC/DB US/CD

COMPUTER SPORTS WORLD [CSW] Sports information database service VI/MC/AM/DI/COD US/CD/OT

CORNER VIDEO [CV]
Videos, laser disks & accessories
VI/MC/AM US/CD/JP

COURT PHARMACY [RX]

Full service pharmacy & gift shop VI/MC/AM/DI/DIS/COD US/CD/JP/OT

CRABTREE & EVELYN [CR] * *
Beauty products, sweets, gift packs
VI/MC/AM US/CD

DIRECT MICRO [DM] **
Discount computer disks & supplies VI/MC/COD US/CD/JP/OT

DISCOUNT MUSIC SUPPLY [DMS]

Guitar effects & accessories VI/MC/COD US/CD/JP/OT

DOW JONES & CO. [DJ]

Business & financial periodicals
VI/MC/AM US/CD

DREYFUS CORPORATION [DR]
Mutual funds & investment information

EDUCATIONAL ADVISORY SERVICES [EA] Financial aid search service VI/MC US

ELITE EYEWEAR [EE] **
Non-prescription & presc. sunglasses
VI/MC/AM US

ENDLESS VACATION TRAVEL

[EV] *
Resort condo rentals, vacation info VI/MC US/CD/JP/OT

EXECUTIVE STAMPER [EX] Rubber stamps, engraved gifts VI/MC/AM/DI/DIS US/CD/JP/OT

FLORIDA FRUIT SHIPPERS
[FFS] Premium fruit & gift shippers
VI/MC/AM US/CD/JP/OT

FLOWER STOP [FS]
Flower & gift delivery service
VI/MC/AM/DI/DIS US

FORD MOTOR COMPANY Car & truck info, dealer locator VI/MC US/CD

44-CAKES [DS] Shop-at-home gourmet desserts VI/MC/AM US

FRANCE INFO USA [FI] †
A kiosk of information about France VI/MC/AM/COD/DB US/CD/JP/OT

G

GODIVA CHOCOLATES [GC] ** Gourmet chocolate & gifts VI/MC/AM US

н

H&R BLOCK [HRB]
The Income Tax People
NA US

HAMMACHER SCHLEMMER [HS] **
Gifts, unique & unusual products
VI/MC/AM/DI US/CD/JP/OT

HEATHKIT [HTH] * *

Build-it-yourself electronic kits, etc. VI/MC/AM/SC US/CD HOBBY CENTER TOYS [HC]

Hobbies, trains, dolls & games VI/MC/AM/DI/DIS/CSH US/CD/JP

INSURANCE INFORMATION INC. [II]
Home, term life & auto insurance info
VI/MC/AM US

J.C. PENNEY [JCP] †
Apparel, furnishings, electronics
NEW! Go JCP for details

LASER'S EDGE, THE [LE] ** Your one-stop laser video store VI/MC/AM/DIS US/CD/JP/OT

LOBSTER EXPRESS [LOB] †
Seafood gift pack specialist
NEW! Go LOB for details

MACUSER [MC] Save 58 & receive free gift VI/MC/DB US/CD

MACWAREHOUSE [MW] Macintosh hardware, software & eqpt. VI/MC/COD US/CD/JP/OT

MARYMAC INDUSTRIES [MM] Official Radio Shack dealer VI/MC/AM/DIS/CSH US/CD/JP

MAX ULE DISCOUNT BROKERAGE [TKR] Brokerage & financial info retrieval CSH US/CD/JP/OT

MCGRAW-HILL BOOK COMPANY
[MH] *

Business, finance & computer books VI/MC US/CD/JP MENTOR TECHNOLOGIES [MN]
Authorized CompuServe training
VI/MC US

MICROWAREHOUSE [MCW] Hardware, software & eqpt. for PC's VI/MC/COD US/CD/JP/OT

MILTROBE ELECTRONICS
[MI] * *
Consumer electronics, tools, gifts
VI/MC/MO US/CD

MONEY'S FINANCIAL MARKET [MFM]
Personal Finance Tools from Money
VI/MC/AM US

ASSMBERSHIP [MTV]

MTV CLUB MEMBERSHIP [MTV] Tomorrow's Music Today-video & NEW! Go MTV for details

MUSEUM OF FINE ARTS, BOSTON [FA] † Gifts & classic reproductions NEW! Go MFA for details

MUSIC ALLEY ONLINE [MAO]
Mixers, synthesizers, keyboards, etc.
VI/MC/COD US/CD

NEW AGE RESOURCES [NAR] *

Health products, computer supplies VI/MC/COD/CHK US

NEWSNET [NN]
Specialized business news database svc NA US/CD

NEWSWEEK [NW]
New, gift, & student subscriptions
VI/MC/AM/DI/DIS/DB US

NISSAN MOTOR CORPORATION [NI] Nissan cars, trucks & accessories

0

OCEAN ISLE SOFTWARE [OI]
Easy to use & what users expect VI/MC US

ODONYX SCIENTIFIC [DU] † Pharmaceutical, medical & lab supply VI/MC/AM/DIS US/CD/JP/OT

OFFICAL AIRLINE GUIDES, INC.

Info on online svcs; air & hotel guides VI/MC US/CD

ONLINE STORE [OS] Computer accessories, hardware VI/MC/AM/DI US

OUTDOOR OUTFITTERS
[OO] * *
Camping & fishing equipment
VI/MC/AM/CHK/MO US/CD

PARADISE TECHNOLOGY [PT] Hand-held computers, voice & tone equipment.

PC COMPUTING [PCC]
Save 58 & receive free gift
VI/MC/DB US/CD

PC MAGAZINE [PM] Save 54 & receive free gift VI/MC/DB US/CD PENGUIN BOOKS [PB] * *

Books, new titles, catalogs
VI/MC/AM/DIS US/CD/JP/OT
PEPPERIDGE FARM [PF] **
Gourmet cookies, candies, gifts, etc.
VI/MC/AM/DI/DIS US

PROGRAMS PLUS [PP]
Apple/Macintosh software & access.
VI/MC US/CD/JP/OT

PUSH PEDAL PULL FITNESS [PPP] **
Professional home exercise

equipment VI/MC/AM/DIS US

RECORD & TAPE CLUB [RT] * Record & tape ordering club DB US

RENT MOTHER NATURE

[RM] *
Nature's gifts leasing programs, etc.
VI/MC/AM US/OT

RIN ROBYN POOL & PATIO [RR] Pool & patio, outdoor items VI/MC/AM US/CD/JP/OT

SAFEWARE COMPUTER INSURANCE [SAF] High-tech equipment insurance

SHARON LUGGAGE AND
GIFTS [SL] *
Leather goods, novelty gifts, etc.
VI/MC/AM US/CD

SHOPPERS ADVANTAGE CLUB Discount shopping club

SIMON DAVID [SIM] * *

Gourmet foods, meats from Texas VI/MC/AM/DIS US/CD/JP/OT

SMALL COMPUTER BOOK CLUB [BK] Quality computer books DB US/CD

SOFTWARE DISCOUNTERS OF AMERICA [SDA] Software for a range of computers

VI/MC US/CD

SOME THINGS SPECIAL'S UNIQUE BOUTIQUE [SP]
Unique gifts & computing

accessories VI/MC/AM/DIS US/CD

SPIEGEL [SGL] * †.
Fashion, gifts, & electronics
VI/MC/AM/SC US

SPORT SOURCE, THE

Sporting goods, apparel, accessories VI/MC US/CD/JP/OT

STATIONERY CENTER, THE [SC] Office supplies, furniture, etc. VI/MC/AM/DIS/COD US/CD/JP

IV

CC

COF

TIME-LIFE BOOKS [TL] Exciting book series subscriptions VI/MC/AM US

TSR GAMES SHOPPE [TSR] ** Adventure, fantasy games & accessories
VI/MC US/CD/JP/OT

U

USA TODAY [UT] †
Subscribe to The Nation's Newspaper NEW! GO UT for details

VIDEO CLUB [VC] *
Movie video ordering club
DB US

W

WALDENCOMPUTERBOOKS [WB] Computer books & accessories VI/MC/AM US/CD

WALTER KNOLL FLORIST [WK]
Plants, flowers, & gifts via FTD
VI/MC/AM/DI/DIS/DB US/CD

WILLIAMS & EEDEN GARDEN CENTER [WE] ** Flowers, plants & garden tools VI/MC US/CD

WINDHAM HILL [WH] **
Jazz, New Age, children's recordings
VI/MC/AM US/CD/JP/OT

YES! BOOKS AND VIDEOS [YB] ** A unique collection of books & videos VI/MC/AM US/CD/JP/OT

Merchants by Department

APPAREL/ACCESSORIES

AO Artwear/Outwest * * AU Austad's Golf Shop † Sharon Luggage and Gifts Spiegel *† SL SGL The Sport Source * + + SS

ARTS/MUSIC/VIDEO

AM AM/PM Music & Video CD Compact Disc Club * CM The Classical Music Club CV Corner Video † Discount Music Supply * † DMS The Laser's Edge ** LE MAO Music Alley Online FA Museum of Fine Arts, Boston †
Record and Tape Club * RT The Video Club *
Windham Hill * VC WH YES! Books and Videos * *

YB **AUTO**

AL Alamo Rent A Car AQ Autoquot-R AV **AutoVision** Buick Magazine BU CHV The Chevrolet Showroom CIGNA Insurance †
Ford Motor Co. *
Nissan * CI **FMC** NI

BOOKS/PERIODICALS BB Brady Books * * BW Business Week CS Computer Shopper DJ Dow Jones & Company The McGraw-Hill Book MH MacUser MC MFM Money's Financial Market NW Newsweek PCC PC/Computing PM PC Magazine Penguin Books ■ * PB BK Small Computer Book Club TL Time-Life Books USA Today † UT WB Walden Computer Books

BUSINESS/FINANCE

ATT

MFM

NN

VC

AH

Resources Online † INC Business Incorporating Guide Business Week BW CF CheckFree DR Dreyfus Dow Jones & Company DJ HRB H&R Block 11 Insurance Information TKR Max Ule Discount Brokerage

Money's Financial Market

AT&T Home-Office

NewsNet CLUBS/MEMBERSHIPS

The Classical Music Club CM CD Compact Disc Club RT Record and Tape Club * Shoppers Advantage Club SAC Small Computer Book Club BK Time-Life Books TI The Video Club *

COMPUTING

A> Help Store American Training International ATI CDA CDA Computer Sales ** The CD-ROM Store RS CE Computer Express CS Computer Shopper PD The Computer Mart
Direct Micro *
Heathkit * DM HTH MacUser MC MW MacWarehouse MM Marymac Industries MCW MicroWarehouse • New Age Resources ■ * NAR OI Ocean Isle Software OS Online Store PT Paradise Technology PCC PC/Computing PM PC Magazine PP Programs Plus SAF Safeware Computer

Insurance

America

Software Discounters of

SDA

Some Things Special's Unique Boutique WB Walden Computer Books

Alaska's Ivory Cache **
The Chef's Catalog **

GIFTS/COLLECTIBLES

Coffee, Anyone ??? Crabtree & Evelyn 44 Cakes CR DS Florida Fruit Shippers FFS FS Flower Stop Godiva Chocolates ■ * GC FA Museum of Fine Arts, Boston †
Pepperidge Farm ■ * PF Rent Mother Nature ** RM Sharon Luggage and Gifts * SL SIM Simon David * * Some Things Special's Unique Boutique SP WK Walter Knoll Florist

GOURMET FOODS/FLOWERS

Alaska's Ivory Cache **
Godiva Chocolates ** GC Coffee, Anyone ??? COF DS Florida Fruit Shippers FFS Flower Stop FS Lobster Express †
Pepperidge Farm *
Rent Mother Nature * LOB PF RM Simon David SIM Walter Knoll Florist WK WE Williams & Eeden Garden Center *

HEALTH/BEAUTY

The Court Pharmacy RX Crabtree & Evelyn CR Elite Eyewear EE New Age Resources ■ * NAR Odonyx Scientific †
Push Pedal Pull ** DU PPP

HOBBIES/TOYS/PETS

Hobby Center Toys

TSR Games Shoppe ■ * TSR Williams & Eeden Garden Center * WE

INFORMATION/SERVICES

AT&T Home-Office ATT Resources Online † AT&T Toll-Free 800 ATT Directory †
CIGNA Insurance † CI Computer Sports World †
Educational Advisory Services CSW FA First Run Computer Services FR Safeware Computer Insurance SAF

MERCHANDISE/ELECTRONICS

The Chef's Catalog ** CompuServe Store ORD The Court Pharmacy RX Hammacher Schlemmer ■ * HS Heathkit * *
Miltrobe * HTH MI Shoppers Advantage Club * Spiegel * † SAC SGL

OFFICE SUPPLIES

Direct Micro ■ * DM Executive Stamper EX The Stationery Center SC

SPORTS/LEISURE

AU Austad's Golf Shop † Computer Sports World † CSW Elite Eyewear FF Hammacher Schlemmer **
Push Pedal Pull ** HS PPP Rin Robyn Pool 'N Patio The Sport Source + + RR SS

TRAVEL/VACATIONS

Air France AF Endless Vacation Travel * FV FI France Info † Official Airline Guide OA Sharon Luggage and Gifts * SL

GOINGS-ON AT A GLANCE

Never a connect-time fee

AT&T 800 Directory GO ATT (through Dec. 31) Buick Magazine GO BU (through Dec. 31) The Chevrolet Showroom GO CHV (through April 25)

Free shopping weekends

(12:01 a.m., Saturday to 11:59 p.m., Sunday.)

March 3 and 4 Dreyfus GO DR

Museum of Fine Arts, Boston GO FA

March 10 and 11 THE COMPUTER CONNECTION

Shop these merchants for free

A> Help Store GO AH American Training International GO ATI CDA Computer Sales GO CDA The CD ROM Store GO RS Computer Express GO CE Computer Shopper GO CS The Computer Mart GO PD Direct Micro GO DM MacUser GO MC MacWarehouse GO MW MaryMac Insdustries GO MM MicroWarehouse GO MCW Ocean Isle Software GO OI Online Store GO OS Paradise Technology GO PT PC/Computing GO PCC PC Magazine GO PM Programs Plus GO PP Safeware Computer Insurance GO SAF Small Computer Book Club GO BK Software Discounters of America GO SDA Some Things Special's Unique Boutique GO SP Walden *Computer* Books GO WB

PLUS ...
Air France GO AF
Dreyfus GO DR
Heathkit GO HTH
Pepperidge Farm GO PF
Push Pedal Pull Fitness GO PPP
USA Today GO UT

March 17 and 18 ONLINE FOOD AND FLOWER FAIRE

Shop these merchants for free:

The Chef's Catalog GO CC
Coffee Anyone??? GO COF
Crabtree & Evelyn GO CR
44 Cakes GO DS
Florida Fruit Shippers GO FFS
Flower Stop GO FS
Godiva Chocolates GO GC
Lobster Express GO LOB
Pepperidge Farm GO PF
Rent Mother Nature GO RM
Simon David GO SIM
Walter Knoll Florist GO WK
Williams & Eeden Garden Center GO WE

PLUS... Air France GO AF Austad's GO AU CDA Computer Sales GO CDA CIGNA GO CI Computer Sports World GO CSW Drevfus GO DR

March 24 and 25 HOBBIES, SPORTS AND GAMES

Shop these merchants for free:

Austad's Golf Shop GO AU
Computer Sports World GO CSW
Heathkit GO HTH
Hobby Center Toys GO HC
Odonyx Scientific GO DU
Outdoor Outfitters GO OO
The Sport Source GO SS
Tall Tails GO TT
TSR Games Shoppe GO TSR

PLUS ... Air France GO AF CDA Computer Sales GO CDA CIGNA GO CI Dreyfus GO DR

March 31 and April 1 MONEY MATTERS AND INFORMATION SERVICES

Shop these merchants for free:

AT&T Home Office Resources GO ATT Business Incorporating Guide GO INC Business Week GO BW CheckFree GO CF CIGNA GO CI Dreyfus GO DR Dow Jones & Company GO DJ Educational Advisory Service GO EA Executive Stamper GO EX H&R Block GO HRB Insurance Information GO II Max Ule Discount Brokerage GO TKR Money's Financial Market GO MFM NewsNet GO NN Stationery Center GO SC USA Today GO UT

Shop these merchants for free

PLUS ... Air France GO AF CDA Computer Sales GO CDA Pepperidge Farm GO PF

April 7 and 8 ONLINE AUTO SHOW

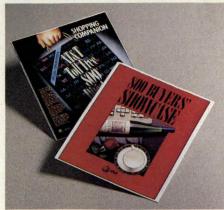
Shop these merchants for free:

Alamo Rent A Car GO AL
Autoquot-R GO AQ
AutoVision GO AV
Ford Motor Co. GO FMC
Lasers Edge GO LE
Nissan GO NI
Software Discounters of America GO SDA

Coming in April

Get To Know The Mall continues with ...

- Spring Fashion and Fitness April 14 and 15
- Books, Music and Culture April 21 and 22
- Travel and Leisure April 28 and 29
- Plus grand openings for J.C. Penney, Publishers Clearing House, Paul Frederick Shirts and more.



Browse for free all year. GO ATT



Explore Austad's grand opening. GO AU



Find free investment information. GO DR

What the heck is "free connect"?

Whenever you read about a free-connect weekend in *Go Mall*, know you can browse through participating merchants' online stores for those two days without paying standard CompuServe connect rates. In other words, you pay nothing while you explore a Mall store that's currently offering free connect.

An up-to-date list of free-connect weekends can always be found online in "This Week's Mall News." (Though connect-time charges are waived, any applicable communications surcharges do remain in effect. Sorry.)

Who says you can't get something for nothing?

PACIFICPAGE:

Your LaserJet Never Looked Like This

Pacific Data Products

6404 Nancy Ridge Dr. San Diego, CA 92121, Phone: 619/552-0880, Fax: 619/552-0889

Computer: Any system operating a LaserJet Series II printer.

Operating System: Not applicable.

Features: When plugged into the cartridge slot of a LaserJet Series II, PacificPage emulates PostScript including access to 35 Apple LaserWriter NT equivalent font families; provides all PostScript version 47 capabilities including reversed text and scaled fonts.

Requirements: LaserJet Series II with minimum 2.5MB RAM.

Options: None. List price: \$695

If you're a LaserJet Series II user whose mouth waters whenever you think of all those PostScript features your printer doesn't offer, listen up.

Would you like to have a cartridge that plugs into the left slot on your LaserJet and instantly provides full PostScript capabilities? Well, that's exactly what you get with the PacificPage cartridge. With PacificPage installed, you have immediate access to 35 LaserWriter-equivalent scalable fonts, text features such as reverse text, and with the proper software, stretching, rotating and all PostScript graphics capabilities.

Only slightly longer than a standard font cartridge, PacificPage uses a PostScript interpreter licensed from Phoenix Technologies to translate PostScript data coming from your computer into language that your LaserJet Series II can understand. It actually grabs control of your printer's processor and "tricks" it into thinking it's a PostScript printer.

This, of course, makes PacificPage a clone and not a true Adobe PostScript device. Does that mean a sacrifice in quality? In some clones I've seen, the answer would be yes. Adobe's "hints," which are the secret to improved font crispness at small point sizes, are proprietary and so cannot be used by other manufacturers without a license from Adobe. The result in some packages that do their work through software is a definite drop in quality.

But PacificPage uses font outlines from Bitstream along with Bitstream's new Quality Enhancement Module, which makes use of a similar set of "rules" to improve font quality. The result is a crispness and sharpness that I judge to be at least as good as any I've seen from a 300 dpi Adobe Post-Script printer. Because PacificPage cannot work with Adobe soft fonts, you'll have to use Bitstream fonts if you decide you need fonts in addition to the 35 in residence. After seeing the results achieved with Bitstream outlines, though, I doubt that you'll be disappointed.

Because PacificPage needs a lot of elbowroom, the LaserJet Series II must have a minimum 2.5MB of memory installed. But that's all you need, other than software that can output PostScript files. I tested PacificPage with software packages including PageMaker, WordPerfect, Harvard Graphics and Publisher's Paintbrush and had no compatibility problems.

Installation of PacificPage consists of plugging it in. That's it. Remarkably, there is no software to fiddle with, and no switches to set. The package does include a software "toggle" switch that lets you switch your printer back and forth between LaserJet (PCL) and PostScript mode from the DOS command line. The same thing can be accomplished at the touch of two buttons on the LaserJet's front panel. I've found the latter method to be the fastest and easiest when I want to switch from one mode to another.

With PacificPage installed, the LaserJet automatically boots up in PostScript mode. The readout on the front panel will say "PacificPage." When you switch back over to PCL, the familiar "ready" message will be displayed.

But all the news is not good. For one thing, you can expect printing times to increase drastically. The LaserJet in PCL mode will seem like greased lightning compared with the painfully slow snail's pace of PacificPage. This is especially pronounced with a file that makes heavy use of bitmapped graphics. Typically, a file that prints in about 50 seconds in PCL mode will take about three minutes with PacificPage in control.

PacificPage is such a good product that it deserves better treatment from its documentation. It doesn't require much written information, but the package I received is just too skimpy. There is no keyboard mapping for the two symbol font sets that are included. Neither is there any mention of, or keyboard mapping for, the symbol sets used with the regular fonts. That is further complicated by the absence of displayable "screen fonts" for the 35 native PacificPage fonts, so locating characters and accurately fitting text cannot be done readily on the screen.

I located the extended characters I use frequently by much trial and error. The symbol sets appear to be largely ANSII, but there are some differences that create a problem the buyer should not be asked to deal with.

These tribulations, though, are a small price to pay for the powerhouse of features offered by the PostScript environment. As one PacificPage user I know said, "Just having the ability to print in reverse text made PacificPage a worthwhile investment for me."

I feel the same way.

Reviewed byWilliam J. Lynott

William J. Lynott is president of W.J. Lynott Associates, management consultants specializing in personal computer applications for small business. He has been a frequent contributor of CompuServe Magazine reviews for many years.

Go Online for Hardware Review

The following hardware review is available this month in *Online Today* (GO OLT-220).

Mac-2-DOS Drive and Software Manufacturer: Central Coast Software Computers: Commodore Amiga.

59

PC GLOBE 3.0:

Software that Delivers the World

PC Globe Inc.

4700 S. McClintock Dr. Tempe, AZ 85282, 602/730-9000 or 800/255-2789, Fax: 602/968-7196

Computers: IBM PC, PC-XT, PC-AT, PS/2 and compatibles.

Operating Systems: PC-DOS or MS-DOS 2.0 or higher.

Media: Supplied on five 360K 5.25-inch diskettes (3.5-inch diskettes available); may be run from two diskette drives or hard disk.

Copy Protection: None.

Required Peripherals: CGA, EGA, VGA (640 by 480) or Hercules Graphics Card with compatible monitor.

Other Requirements: Minimum 512K RAM.

Optional Items: Microsoft-compatible mouse; printer compatible with Epson EX/FX-series, IBM Proprinter, IBM Color Printer, Okidata Microline-series, Star NX-10/15/1000, Hewlett-Packard DeskJet or Hewlett-Packard LaserJet Series II; hard disk with at least 1.5MB of free

System used for test: 1024K Proteus 286GTX with two 1.2MB diskette drives, one 20MB hard disk, two 15MB Sysgen DuraPak drives, ATI VGA Wonder video adapter, Princeton Ultra-14 multifrequency monitor, Microsoft Mouse and Epson FX-85 printer; running PC-DOS 3.10 at 12 MHz.

List Price: \$69.95

When reviewing the PC-Globe+ mapping system for Online Today in August 1989, I was impressed by what it offered for very little money. Not only was the initial cost low, but the package neither needed nor supported any extra-cost databases or map boundary files.

Now PC Globe Inc. (formerly Comwell Systems) has released PC Globe 3.0. Like its predecessor, this software is complete as delivered and carries the same low price tag. But the new version comes on five diskettes instead of four, increases memory requirements from 384K to 512K and takes somewhat more room on a hard disk.

Like PC-Globe +, PC Globe 3.0 draws, displays, prints and exports various maps, and it comes with surprisingly diverse data for 177 countries.

After easy installation and setup, the program starts by displaying a map of the world and a seven-item menu bar. The main menu has help, world, region, country, database utilities and quit functions, with each pulling down its own submenu. However, the map now displays in a form and with colors comparable to a companion product called PC USA (reviewed in Online Today Daily Edition, February 1990).

Using world or region menus, a user can designate an "active" country for further analyses. The selection can be made from a menu or though a new point-and-shoot cursor positioning technique. Other selections pick from nine continents or regions, 18

special groups (such as EEC, OPEC and Warsaw Pact) or hundreds of major cities.

During world, continent or region mapping, specific groups can be highlighted. A world map might highlight the "least developed" countries. A Europe map might highlight Warsaw Pact nations or the European Economic Community. A South America map might highlight "non-aligned movement" nations.

For individual countries, PC Globe 3.0 has somewhat improved capabilities and can display a base map (with or without rivers) or identify and locate major cities. It also can present colorful topographic maps of elevations or labeled symbolic maps of major features such as mountains, volcanoes, deserts, forests, swamps, plains and more. It even identifies and locates a few major man-made features such as the Great Wall of China, but it omits others such as the pyramids of Egypt.

Various data can be extracted for a country as bar graphs of population, age distribution and gross national product plus tabular charts of languages, ethnic groups, religions, health statistics, city populations (and locations), resources, products, industries, imports, exports, government, culture and tourism. These PC Globe 3.0 outputs remain basically the same as those from PC-Globe +.

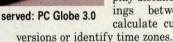
Multicountry comparisons also remain much the same. These graph data for up to 11 countries at a time in any of 11 demographic, eight economic, 17 health-related or 46 commodity categories. A user still can quickly identify something like the top 10 sugar-producing nations. It's equally easy to see how a selected country compares to the top 10, the bottom 10 or a specific selection of countries in matters as diverse as liter-

acy, tourism receipts, hospital beds, cement production and so on. I was disappointed that the new software had not enlarged the selection of data categories. There would be plenty of opportunities to add data for new topics, though expansion probably would raise the program's price.

The same category choices can be dis-

played on color-coded maps using either five or nine data ranges. Now, they can be displayed on continental or regional maps as well as world maps, so a user can map something like wool production for Europe or diamond production for Africa.

Nor have program utilities changed much. PC Globe 3.0 still provides the abilities to display distances and bearings between cities, calculate currency con-



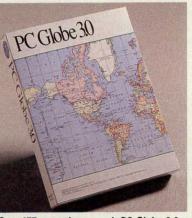
PC-Globe 3.0 retains a screen printing function for putting maps or graphs on paper. However, it still lacks user control over printout size, position, density or fill patterns.

Another facility makes PCX-format (but not TIFF-format) files from map or chart screens and has been partially fixed. The files may be imported into drawing, desktop publishing and other programs. They now load into PC Paintbrush+ or Publisher's Paintbrush correctly. But when imported directly into PageMaker 3.0, maps are pure black and white, without details. They would have to be manipulated outside the desktop publisher to do shading. It would have been nice had PC Globe provided a color-to-shading conversion.

Although differences between PC Globe 3.0 and its predecessor are largely cosmetic, this extraordinary product gives a lot of mapping capability and useful data for the price. While it probably isn't worthwhile to pay to upgrade the older package, a firsttime purchase certainly is advisable.

Reviewed by Ernest E. Mau

Ernest E. Mau, a full-time free-lance writer and CompuServe Magazine reviews editor, is based in Aurora, Colo. He is the author of several books and more than 500 articles on personal and business computing products and applications.



Over 177 countries served: PC Globe 3.0

STUDIO/1:

Swiss Army Knife of Paint Programs

Electronic Arts Inc.

1820 Gateway Dr. San Mateo, CA 94404-2497, 415/571-7171, Fax: 415/570-5137

Computers: Macintosh Plus, Macintosh SE family or Macintosh II family.

Operating System: System 6.0.2 or higher.

Media: Supplied on three 800K diskettes (one is HyperCard demo); may be run from external diskette drive but hard disk is strongly recommended.

Copy Protection: None.

Required Peripherals: Apple-compatible printer; HyperCard required for demo/tutorial.

Other Requirements: 1MB RAM required but at least 1MB additional memory is recommended; to create large disk-based drawings or animations, keep at least 3MB hard disk storage available.

Optional Items: Scanner or video digitizer; source of "SND" sound resources for animations.

Systems used for test: (1) Macintosh Plus with Everex 20D 20MB external hard disk, Thunderware LightningScan hand scanner and ImageWriter II printer; running System 6.0.3 and Finder 6.1. (2) 5MB Macintosh IIcx with FDHD diskette drive, 40MB hard disk, Sysgen MAXI RD45 cartridge drive, AppleColor High-Resolution RGB Monitor, 256-color Macintosh II Video Card, Thunderware LightningScan hand scanner, Scion Image Capture 2 video digitizer and Qume CrystalPrint Publisher laser printer; running System 6.0.4 and Finder 6.1.4.

List Price: \$149.95

Studio/1 is the Swiss army knife of paint programs. It's the best black-and-white paint program I've seen, and it also can create on-screen animations and presentations. Who wants black- and-white presentations? I do! Most business communications, except slides, are produced in black and white because it's cheaper.

Installing the program is as simple as dragging a few icons onto a hard disk. A HyperCard demo is included on a separate diskette, but unless you're a complete Macintosh novice, don't waste hard disk space on it.

The manual is extremely well written. Pay attention to the suggestion to remove Apple's "Easy Access" program from the System Folder. Otherwise, Studio/1 could encounter conflicts. The manual presents a method for running the program on a two-diskette system, but I wouldn't try it. The program's not particularly speedy even with a hard disk. While slow on a 1MB Macintosh

Plus with 20MB hard disk, it seemed more responsive on a 5MB Macintosh IIcx system. Although not mentioned in the manual, Studio/1 seems to work best with at least 2MB of memory.

Studio/1 reads and writes PICT, MacPaint, TIFF, EPSF, PICS and Electronic Arts' own animation format. Once saved,

documents display Studio/1's own icons but can be opened by any program that accepts those file types. When I opened a PICT file, I was greeted with the same kind of "preview" window that is popular with presentation packages today. Be aware that the pro-

gram only "previews" some PICT files; other formats can be previewed only after having first been saved by Studio/1.

MacPaint users can start drawing immediately but will notice a few new tools. Users of Electronic Arts' Studio/8 color package will feel right at home since many of its tools seem to have been incorporated into the black-and-white Studio/1. (Refer to file STUO89.SEP in Online Today Forum Library 5 for review of Studio/8.)

When I opened the program, I was presented with a MacPaint-like toolbox and drawing window. Besides the lasso and marquee selection tools, Studio/1 also includes a polygon selector. It is nice, but I prefer to use the old standards. There are the familiar grabber ("hand"), eraser and text tools.

Text is where Studio/1 really shines. All text is placed on a separate layer and can be printed on a laser printer at 300 dpi instead of the 72 dpi limit of most paint programs.

Other familiar tools include the paint bucket, pencil and paintbrush. MacPaint's spraycan is replaced with a more flexible and controllable airbrush. The toolbox even includes a Bezier curve tool, which is almost never found in a bit-mapped paint program.

Scanners are accessible from within the program, if the particular scanner provides an INIT for the System Folder. A driver is provided for Apple's scanner, but

LightningScan's Desk Accessory worked perfectly.

Nine shape-drawing tools can be filled with either blank space or an editable palette of patterns or gradients. I found the four gradient patterns could be used with other tools, too. Using the paint bucket, I filled a calligraphic logo, scanned by Light-

ningScan, with a gradient pattern. The effect was striking and difficult or impossible to achieve with other black-and-white paint programs.

Electronic Arts thinks they provided these painting tools to let users create animations. I prefer to think of Studio/1 as a paint program with animation capabilities rather

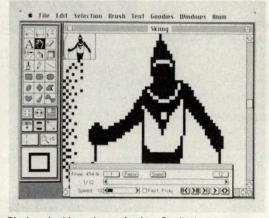
than the other way around. But it's no slouch as an animator. Instead of the "cast member" approach used by VideoWorks II and MacroMind Director, Studio/1 uses "Animbrushes." The technique of "Animpainting" gives animation fans an easy way to produce sequences by using a tool to create objects while the program produces the animation.

The first 52 pages of the manual shows everything you'll need to learn about painting and animating. Interestingly, as slow as painting tools are, animations run quickly and smoothly. Animations are easy to create, and the program is capable of sophisticated functions that belie the program's modest cost.

Here's my dilemma. Studio/1 is aimed at the Macintosh Plus or SE but performs better on a Macintosh II. A Macintosh II can run Electronic Art's Studio/8 in black-andwhite mode but won't have animation capabilities. A Macintosh II owner who really wants animation would be better off with MacroMind Director.

I've come full circle. If you like the program's features as I do, you'll have to add memory above 1MB to be truly happy with its performance. What the heck, you'll need it for System 7.0 anyway. ◀

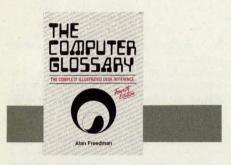
Reviewed by Anthony Watkins



Black and white paint perfection: Studio/1

Book Reviews

Following are summaries of book reviews available for reading this month in *Online Today*. To read the complete reviews, type GO OLT-240 at any CompuServe! prompt.

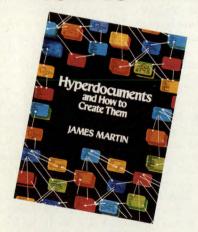


The Computer Glossary: The Complete Illustrated Desk Reference (Fourth Edition)

By Alan Freedman AMACOM, 1989 776 pages, \$24.95 (softcover)

Calling this an indispensable dictionary for anyone using a computer, reviewer Cathryn Conroy especially recommends it to the computer novice. She praises the book for its understandable definitions of many complex technological terms. GO OLT-5900

Hyperdoc How-to



James Martin, world-renowned systems guru and bestselling computer book author, shows you how to put the power, elegance and versatility of hyperdocuments at your fingertips with Hyperdocuments and How to Create Them. From Prentice Hall. \$24.95 GO WB

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The Fifth Generation: The Future of Computer Technology

By Jeffrey Hsu and Joseph Kusnan Windcrest Books, 1989 187 pages, \$16.95 (softcover)

If you're interested in dipping your toes—and not much more—into the fascinating fifth generation of computing, this is the book for you. Reviewer Richard A. Danca praises it as a worthwhile introduction to the future of computing, but criticizes it for a number of major flaws, including poor editing, awkward writing and missed topics. *GO OLT-5920*



The WordPerfect Question and Answer Book

By Eric M. Stone and Chris Doner Sybex, 1989 327 pages, \$18.95 (softcover)

This convenient, troubleshooting guide to one of the most popular word processing programs is ideal for those who have more questions than answers about WordPerfect. Reviewer James Moran calls the book definitive and understandable. *GO OLT-5930*



Dr. Macintosh: Tips, Techniques and Advice on Mastering the Macintosh

By Bob LeVitus Addison-Wesley, 1989 341 pages, \$19.95 (softcover)

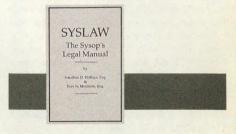
Likening Macintosh use to driving a car with automatic transmission, reviewer Susan Katz says this book will get you moving quickly with its many tips and tricks, product recommendations and examples based on the author's first-hand experience. GO OLT-5910



The Lotus Guide to 1-2-3 Release 3

By David J. Bookbinder Addison-Wesley, 1989 859 pages, \$22.95 (softcover)

Noting that this book would have been an excellent addition to the official Release 3 documentation, reviewer William J. Lynott praises it for its thoroughness, clear writing style and understandable explanations of the program's complex capabilities. GO OLT 5940



Syslaw

By Jonathan D. Wallace and Rees W. Morrison LLM Press, 1988 121 pages, \$21 (softcover)

Calling it required reading for all computer bulletin board sysops, reviewer James Moran praises this small book that is packed with legal facts about a sysop's liability and ways potentially harmful situations can be defused. *GO OLT-5950*

Advertiser's Directory

A-Comm Electronics	63
Coffee, Anyone ???	63
Checkfree	1
CompuServe Information Manag	ger 12, 13
CompuServe Mail	21
Computer Search	37
EAASY SABRE	5
Epoch Data	63
GE Ridge	63
IQuest 31	, 33, 35, 37
Macintosh	36
Max Ule	25
Mentor Technologies	3
	Cover 2, 63
On-line Store	Cover 4
Osborne/McGraw Hill	39
Paradise Technology	63
PARS	Cover 3
Quick & Reilly	27
Radio Shack	9
Shoppers Advantage	30
Spear Financial	31
University of Phoenix	36
Walden Books	62

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- 1. Feb. Hardware Listings
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Shopper's Guide

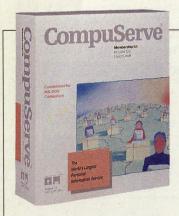
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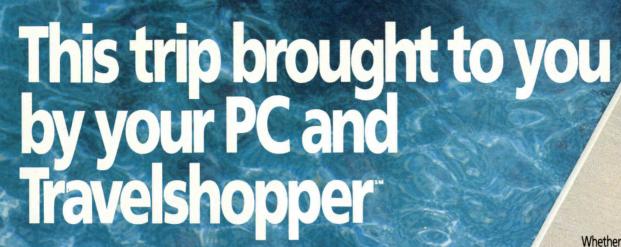
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Winners of the 1989 Recommend-A-Member Contest, which ran from July 1 to Dec. 31, have been announced. Alan R. Bellis of Deerfield Beach, Fla., won the \$500 connect-time grand prize. First-place \$85 connect-time credits were awarded to Richard W. Malott of Kalamazoo, Mich.; David Chin of Brooklyn, N.Y.; and Fran Finnegan of San Francisco, Calif. In addition, connect-time credits were awarded to six second-place winners and five random-drawing winners. The first 1990 Recommend-A-Member Contest will end July 31. GO FRIEND

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